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RATIONAL PSYCHOLOGY:

OR,

THE SUBJECTIVE IDEA AND OBJECTIVE LAW
OF ALL INTELLIGENCE:

BY

LAURENS P. HICKOK, D.D.,

A NEW AND REVISED EDITION

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P R E F A C E.

"It is neither necessary nor possible that all men should be PHILOSOPHERS." A spontaneous intelligence begins in childhood, and is altogether absorbed in the experience of the varied phenomena of the senses. In this respect, most men perpetuate their childhood through life, and never rise above a spontaneous intelligence. They perceive that which appears in the light of the common consciousness, and deduce more or less practical conclusions from experience; but a few minds only of a generation turn themselves back upon consciousness itself, and reflect upon what and how experience must be, and make the conditioning principles of all intelligence the subject of patient and profound investigation. The capability to rise into the higher light of a purely philosophical consciousness, and become familiar with *a priori* principles and transcendental demonstrations, depends so entirely upon the free energizing of the spiritual and the self-controlling of the rational in man, that it becomes a vain hope to find but few in an age to whom such a position is attainable, and for whom such exercises in pure thought possess any interest. No one, who would explain the process or present the results of his investigation in this field, should expect the multitude to give any attention to his communication; yet the ready sympathy of all who are engaged in these common studies, and the reciprocations of a deep and serene interest in every kindred spirit, may give

confidence to any one who has his message to deliver, that if he will but give it utterance in clear voice he shall in such "fit audience find though few."

A perfect philosophy must be universally comprehensive. False principles and wrong processes necessitate an *erroneous* philosophy; while partial principles and processes of demonstration, though not false, must yet give a *defective* philosophy. If we use no element other than truth, and thus avoid a false system; still, until we have comprehended all its truth, we have not attained to the perfected system of science. It would, doubtless, be an arrogant assumption for any one, at the present age, to affirm that from his standpoint all truth may be discovered and a full encyclopedia of science may from thence be ensphered. Each thinker attains a portion only of all truth, and as it is viewed from his position; and it can only be from the collected attainments of many, that we gradually mount to higher stations and reach to more comprehensive conclusions. Not the man, but thinking humanity, is the true philosopher. The tributary streams of ages go to make up the full flow of philosophic thinking, and at length this may pour itself into what yet, to finite intelligence, shall ever be a shoreless ocean.

The preparation and publication of this work has been under the full influence of these considerations. It is not expected that it will be of any interest to the many; sufficient quite, if it reach and occupy the minds of the few, and propagate its reciprocations of free thought through the growing number of such as *can* and *do* familiarize themselves in purely rational demonstrations. Nor has it been deemed that there is here a perfected and universally comprehensive philosophy; though it is believed that the true direction is here taken, and it is also hoped that some progress has been gained, towards the ultimate attainment of that position from which the complete science of all sciences, if ever to be consummated, must at length be perfected. It is intended only as a contribution to the common current of

rational philosophic speculation, and is silently cast into the stream of thought to flow on with it if found to be congenial, or to be thrown ashore if it prove only as a foreign cumbering drift upon its surface.

Thus far was the Preface to the original form of the Rational Psychology. In its present form regard has been taken to the growing acquaintance of the thinking mind with these speculations, and also to the demand that more attention be given to their study in the higher classes of our colleges. Some modifications have thus been made of particular parts, but not in the general method. This had been too comprehensively thought out to admit of any change. Rational psychology must give the accordant idea and law through all the functions of intelligence in the sense, the understanding and the reason. But in the determination of such necessity, it is not now needed that there be a formal laying of the groundwork, and we thus dispense with what was given in Book First, and avoid the undesirable division of the work into two books. The acquired familiarity with pure cognitions permits also the passing by of such parts as were designed merely to facilitate the ready use of such cognitions, specially the relations of space and time to phenomena and of each to the other, and also remarks in several places designed only to show the distinction of view in this work from Aristotle, Kant, and others.

In the application of the results of psychology to ontology, appended to each part, there has been a more specific appropriation of the proof for real being as belonging respectively to the sense and to the understanding. For the clearer conceptions of physical substance and cause, and more especially of the origination of nature from the Absolute Creator, the conception of force as the basis for all philosophical thought in the understanding, and as the essence of all material being, has also been more carefully and completely presented. Many minor modifications have,

moreover, frequently been made, designed to improve the work in clearness and completeness.

The complaint of obscurity from peculiarity of style and terms arises from the nature of the speculation, and nothing but more familiarity with this field of thinking can make any presentation by language to be perspicuous. No words will put the thoughts over into the empty and passive mind, but the mind must come to the language with some previous preparation in its habits of thinking to enable it to discern and take the thought there contained. To the familiar mind the work is not open to the criticism of obscurity, either from style or terminology. The vague reproaches in the charges of transcendentalism and German speculation need no other reply than the emphatic affirmation that whatever danger or error there may be in transcendentalism or Germanism, these are not to be overcome by any timid ignoring or any valorous denouncing of them. They are to be put down in no other manner than by fairly meeting and fully refuting or correcting them in their own methods.

The work has done more than was anticipated for it in awaking and directing thought, and it is given in this revised form from the conviction that its use is still needed to the same ends, and especially as a text or reference book in the higher philosophical instruction of our colleges.

UNION COLLEGE, 1861.

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INTRODUCTION.

PSYCHOLOGY is the Science of Mind. *Empirical Psychology* attains the facts of mind and arranges them in a system. The elements are solely the facts given in experience, and the criterion of their reality is the clear testimony of consciousness. When, between any number of minds there is an alleged contradiction of consciousness, the umpire is found in the general consciousness of mankind. What this general consciousness is, may be attained in various ways ; from the languages, laws, manners and customs, proverbial sayings, literature and history of the race ; and a fair appeal and decision here must be final, for any fact excluded thereby must be *alterum genus*, and should also be excluded from the philosophical system. Such an appeal to general consciousness may properly be termed the tribunal of Common Sense.

Rational Psychology is a very different process for attaining to a Science of Mind, and lies originally in a very different field from experience, although it ultimately brings all its attainments within an experience. As this is the specific subject designed for present investigation, it is important as preliminary thereto, that we attain a clear apprehension of what it is ; and it may also be of advantage to

examine some of the ends to which it may be applied, and thus beforehand see some of the uses to which it may be made subservient.

I. AN EXPLANATION OF WHAT RATIONAL PSYCHOLOGY IS.

In this science, we pass from the facts or experience wholly out beyond it, and seek for the *rationale* of experience itself in the necessary and universal principles which must be conditional for all facts of a possible experience. We seek to determine how it is possible for an experience to be, from those *à priori* conditions which render all the functions of an intellectual agency themselves intelligible. In the conclusions of this science it becomes competent for us to affirm, not as from mere experience we may, that this *is*—but, from these necessary and universal principles, that this *must be*. The intellect is itself investigated and known through the principles which must necessarily control all its agency, and thereby the intellect itself is expounded in its constituent functions and laws of operation.

An illustration of what such a Science of Mind is, may be given by a reference to other things as subjects of rational comprehension. Whatever may be placed in the double aspect of its empirical facts and its conditional principles, may be used for such a purpose. Thus Astronomy has its sublime and astonishing facts, gathered through a long period of patient and careful observation. Experience has been competent to attain the appearances and movements of the heavenly bodies; the satellites of some of the planets, and their relations to their primaries; the apparent changes of figure and place in some, and the occasional transits or occultations of others. The general relations of dif-

ferent portions of our solar system have in this way been found; the sun put in its place at the center, the planets put in their places in their orbits around it, with the direction, distance, and time of periodical revolution accurately determined. A complete diagram of the solar system may thus be made from the results of experience alone, and all that belongs to *formal* Astronomy be finished. In this process, through experience, we are competent to affirm, *so the solar system is*. But if now, on the other hand, beyond experience, we may somehow attain to the cognition of an invisible force, which must work through the system directly as the quantity of matter and inversely as the squares of the distance, we shall be competent to take this as an *à priori* principle, determining experience itself, and quite independently of all observation may affirm, *so the solar system must be*.

Again, I take a body of a triangular form, and by accurate mensuration find that any two of its sides are together greater than the third side. Another triangular body, of different size and proportion of its sides, is also accurately measured, and the same fact is again found. The mensuration of the first did not help to the attainment of the fact in the last, but an experiment only ascertained that so it *is*. Repeated experiments may have been made of a vast number of triangular forms, isosceles, right-angled, and scalene, and of them all, at last, I may make the same affirmation, this is; but from experience I am not warranted to include any thing else than so it is, and in so many cases as the experiment has reached. When, however, I construct for myself a triangle in pure space, and intuitively perceive the relations of its sides, I do not need any experiment, but can

make this intuition valid universally, and affirm for all possible triangles, so the facts *must be*.

Such everywhere is the distinction between an empirical and a rational process. In the one we have the facts as they appear; in the other, we have the conditioning principle which determines their appearance, and which makes our experience of them possible. And now, the human mind, as an intelligent and free agent, may as readily as any other subject, admit of an investigation under each of these aspects. Facts as given in experience, and those arranged in an orderly system as they appear in consciousness, constitute Psychology in that important division which we have denominated *Empirical*: and those principles which give the necessary and universal laws to experience, and by which intelligence itself is alone made intelligible, are the elements for a higher Psychological Science which we term *Rational*. So far as this science is made to proceed, it will give an exposition of the human mind not merely in the facts of experience, but in the more adequate and comprehensive manner, according to the necessary laws of its being and action as a free intelligence. It will, moreover, afford a position from which we may overlook the whole field of possible human science, and determine a complete circumscription to our experience; demonstrating what is possible, and the validity of that which is real. In it is the science of all sciences, inasmuch as it gives an exposition of Intelligence itself.

Such, also, is truly a *transcendental* philosophy inasmuch as it *transcends* experience, and goes up to those necessary sources from which all possible experience must originate; but not transcendental in that sense in which the name has

become a derision and reproach by the perversion of those who have assumed it and dishonored it, and with whom it has been a transcending of all light and meaning, and going off into a region of mere dreams and shadows. A true transcendental philosophy dwells perpetually in the purest light, and sustains itself by the soundest demonstrations; nor is it practicable, by any other method of investigation, to draw a clear line between empiricism and science, assumption and demonstration, facts which appear to be and principles which must be.

Pure Mathematics, and, in a different field, pure Physics also, proceed in the firm and sure steps of a demonstrated science, because they go out utterly beyond all appearance, and attain their elements from a region transcending all that experience can reach. They deal with the necessary and the universal, and hence, as resting upon that which must control all experience and make it possible, it can never occur that any facts in experience should come in contradiction to them. Nor can any thing assumed to be philosophy and attempting to pass itself off as science, and least of all psychological science, take the high road of a sound and valid demonstration, except it shall both start from and lay its course by, the stern demand and rigid rule of necessary principles. True science must be both supported and directed by those ultimate truths, which are self-affirmed in their own light, and which both must be, and must everywhere and evermore be. An empirical system may defend itself and maintain its integrity against all that shall assail it from within; but where the skeptic resolutely goes out beyond those assumptions which are conditional for it, and calls in question the stability of its very foundation, it

is utterly helpless. Thus, the telescope brings distant objects within the reach of observation, and thereby vastly enlarges the sphere of vision. By its aid we may go on in the addition of one newly discovered phenomenon to another in the broad fields of space, and enlarge the system embraced in experimental astronomy to the maximum of power which may be attained for our glasses. We need have no other solicitude for the validity of our system as empirical, save only in the assurance of a correct observation. If any doubts spring up within the facts of our science, we can repeat the observation at pleasure and dispel them. But when, at length, we encounter the skeptic who will not shut himself up within our conditioning assumption of the validity of telescopic observation, and seriously questions the correctness of this whole manner of appearances, and of seeing new objects through magnifying glasses, most surely we shall avail nothing in attempting to cure this skepticism by multiplying our experiments and making such objects to appear through the telescope, nor even by forcing the skeptic to the consciousness that he sees them there himself. He is assailing the system from a point utterly beyond all the facts of observation, and with fatal effect disturbing the integrity of astronomical science in its very foundation, and must needs be met in the very point of his doubts and forced to the conviction that the laws of telescopic vision are valid. And surely this can not be done by looking through the telescope, nor even by taking it to pieces and subjecting all its parts to careful inspection. We shall be obliged to attain those optical principles which are conditional for all making of telescopes, and thus know how telescopic

vision is possible in its own conditioning laws, and determine what *must be* by a rational demonstration, and in this process only can we force such an assailing skepticism from its position.

As is the telescope an instrument for the eye, so is the eye, and all the organism of sense, an instrument for the intellect. While we are solicitous about the facts as they appear in the sense merely, we shall find no difficulty in building up our empirical system and maintaining the validity of our philosophy. Yea, if we wish to take the mental organism itself in pieces and examine its varied phenomena, and put all together again according to observed connections and relationships, an empirical psychology may be thus readily attained, and a system of mental science completed. But when we meet with a skepticism which plants its objections back of all experience, and doubts altogether about this whole matter of appearance in the senses, then are we doing absolutely nothing for science except as we also go back of experience, and by a rigid transcendental demonstration determine from the conditioning principles of all intelligence how experience in the senses is possible to be; and then, by this, also demonstrate in the facts their validity, inasmuch as they are found actually to be, what from their conditioning laws it has already been seen that they must be. There is a skepticism which resolutely and perseveringly questions all validity of experience, and doubts the whole testimony of consciousness relatively to the reality of all being; yea, that founds itself upon an alleged contradiction of reason and consciousness, and thereby demonstrates the necessity of absolute and universal skepticism; and while to such all

experience must be a mere *seeming to be*, with no reality, this can certainly never be cured by any repetition of appearances merely as they seem to be. A solid basis for science is here attainable by no other possible process than through the insight and conclusions of a Rational Psychology. The want is both seen and felt, that something not of experience should be given, by which to demonstrate the validity of experience; nor will thinking minds be long deeply interested in any speculations which do not attempt, at least, to go up to the original and conditioning sources of all knowledge.

The history of philosophy furnishes here ample instruction. Those investigations only which have sought to rise to their conditioning principles, in reference to the subject in hand, have laid any very strong grasp upon the philosophical mind, or fixed the attention of thinking men for any long period. More especially is this true in reference to all philosophy which subjects the human mind to examination, and gives its theory for expounding man's intellectual and moral agency. If the whole be left to repose upon the mere affirmations of common sense, and thus the whole science be circumscribed by the limits of general experience in consciousness, it can not meet this philosophical want, and will not hold the interest of philosophical minds. The point of all dangerous skepticism is wholly out of and beyond the experience in which common sense originates, and if this is not at all sought for, and the effort, at least, made to reach this point and demolish the skepticism, the influence of the work must be limited to those minds which have not yet seen the difficulty, and felt the need of a higher demonstration. Thus, whatever the subject under

examination may be, the skepticism which endangers it as a philosophy will ever lie at its foundation, and can only be met by going back of its facts and giving validity to its conditioning principles; and such studies as are directed to such *à priori* principles will alone possess any philosophical interest.

This is the very spirit of the far-famed Socratic method of philosophizing, and in this lies its influence and its interest. By a series of skillful interrogatories, Socrates forced the disciple back to the elementary principles of the subject under discussion, and made him to seek some conditioning truth, clear in its own light, and on which all subsequent deductions might be seen to be safely dependent. The scholar was in this way made cautious and docile, and the sophist was driven to expose his own ignorance amid all his shallow pretensions. Plato, the most illustrious of his disciples, and the world's great teacher in philosophy, still more thoroughly pursued science up to her primitive sources. The Intellectual Idea was taken as the archetype and *informing* essence, and only in this could facts be made intelligible, and by this only could nature be interpreted. Aristotle, in succession, no less rigidly forced philosophy upward to the science of first principles. His investigations regarded the modes in which nature manifests herself in facts and phenomena, rather than the inherent forces and laws which condition her development; yet it is only through these conditioning laws that any portion of nature can be adequately expounded. He sought rather to reduce science to its logical elements, and to find here the conditioning sources of all correct concluding in judgments. These sages of antiquity have held their power over the

philosophic thinking of ages, and their voice has penetrated through more than twenty centuries, and is still distinct to teach all who have ears to hear. *

The dialectical conflicts of the school-men, long exercised the minds of men in the most subtle and often empty speculations, and ultimately exhausted all the resources of syllogistic disputation, and wearied the world with its abstract terms and dry logical distinctions. Descartes sought to bring back philosophy again to the study of things in their first principles. The germ of his system lies in the following extract: "It is absurd to suppose that which thinks not to be in the very time in which it thinks. And hence this cognition—*I think, therefore I am*—is the first and most certain which may occur to any one philosophizing in order." Thought, as the essence of spirit, and extension as the essence of matter, make up the universe of being, and as opposites and incommunicable in their own nature, are brought and held together in communion through the doctrine of "divine assistance." Spinoza identified thought and extension in a higher substance, and made all modes of spiritual and material being only a manifested development of this higher existence. Leibnitz sublimated all being into indivisible atoms, and as thus indistinguishable by any outer, they must be distinguished each from each by an inner peculiarity, and which, analagous to mind, is a faculty of representing. Every atom with its inner representation-force was thus a monad, and when representing in unconsciousness, is matter; when partially conscious, is animal; when in full self-consciousness, is human soul; and the Absolute Monad arranges all the representations through a "preëstablished harmony."

Lord Bacon, also, as the great modern expounder of Inductive Philosophy, urges to the investigation of nature not in scattered and isolated facts, but in their inherent laws which bind them together in systematic unity. An intellectual analysis into fact and law, matter and form, must be made through all subjects of science, and thus nature must be dissolved, not chemically by fire, but intellectually as by a divine fire. And Locke, again, turned his inquiry to primitive sources that he might accurately circumscribe the entire field of human knowledge. While he has laid the foundation for only a very partial philosophy in the rejection of all *à priori* knowledge, yet from the force and clearness of his investigation of sensation and experience, he has for more than a century and a half held sway over much the larger portion of the philosophic mind of Britain and America. Out of this system have arisen the idealism of Berkely, the vibration theory of Hartley, the materialism of Diderot and Helvetius, the universal skepticism of Hume, and, for the counteraction of the last, the common sense basis for all philosophy as assumed by Reid and most of the Scotch Metaphysicians.

And once more only, it may emphatically be said that for more than half a century the deep and strong current of German thought has been impelled and directed in its course by the profound critical investigations of Kant, relative to the origin and validity of all knowledge. He says, "Up to this time it has been received that all our cognition must regulate itself according to the objects; yet all attempts to make out something *à priori* by means of conceptions concerning such, whereby our cognitions would be extended, have proved under this supposition abortive"

Let it be once, therefore, tried whether we do not succeed better in the problems of metaphysics, when we admit that the objects must regulate themselves according to our cognitions." This reversed order of investigation is the peculiarity of the Critical Philosophy, and is analogous to that change in the stand-point for all investigation which occurred in astronomy, when the sun was put in the center of the system and the observer carried around it, instead of the spectator being himself at rest and the sun revolving. And we need to add merely this remark, that in general, whether as disciples or opponents of Kant, the thinking mind in Germany, and of those who have been aroused by German speculations, have found the interest of the investigations to lie in the deep and earnest search after determining principles. Nor is this fact at all discredited by the querulous complaints and captious reproaches from such as find the ground of these speculations too high for the attention they have given to them, since there is at least the interest to have seemed to have formed a judgment about that which they have not as yet at all comprehended.

The prevailing system of metaphysics must necessarily strongly affect all cotemporary physical investigation, and very much mold all natural science after its own forms. All philosophy must strike its roots in the reason, and its first principles must be found or assumed from beyond the empirical, and entirely within the transcendental. The physical can find no law of exposition save in the metaphysical. It is in this field that the foundations of all systematic philosophy must be laid, for if these are assumptions solely, their conclusions, whether salutary or dangerous, can neither be sustained nor refuted by other assumptions.

Assumption and counter-assumption may forever stand, the one over against the other, and there shall be no force in either to demolish its opposite. We must be able to go over into its metaphysical region, and secure here a legitimate possession, or we can never give to our assumed science authority in its own right to eject the intruding skeptic, nor forbid that he should any where at pleasure erect his fortifications in hostility. An empirical system, standing upon assumptions, can at the best only maintain itself in possession while its original right remains unquestioned. When the title-deeds are contested in the grounds of their valid authority, it can not avail to produce any of the declarations and statements within them, but we must confirm their legitimacy by something beyond the instrument itself, and hold possession from the evidence that they reach back and take hold on the original powers of sovereignty. The most incorrigible skepticism may remain utterly undisturbed in any philosophy, except as it is competent to give to its first principles a sound and clear *à priori* demonstration.

And here we would remark, that it enters into the very essence of Rational Psychology, to make this *à priori* investigation of the human intellect; to attain the *idea* of intelligence, from the conditions which make an intellectual agency possible, and thereby determine how, if there be intelligence, it *must* be both in function and operation; and then find the facts which shall evince that such intellectual agency is not only possible as idea in void thought, but is also actual as valid being in reality. Such an attainment in psychological science, may open the way to the determination of the validity of all science, inasmuch as in this pro-

cess we attain the very laws of human intelligence itself, and may therefore use our position for determining the valid being of the objects given through such an intellectual agency. And this introduces another preliminary topic for examination, to which we will now turn our attention.

II. THE ENDS TO WHICH THE CONCLUSIONS OF RATIONAL PSYCHOLOGY MAY BE RENDERED SUBSERVIENT.

Rational Psychology is itself a science, and complete in its own department. It gives the Mind, through all its functions of intellectual agency, in the conditioning laws which control all its operations and interpret all its processes of knowledge; and when thus completed it has filled its own measure and answered its own end. But interesting as is this Science of the Mind, and worthy to be pursued for its own sake, and competent to give satisfaction even when resting within its own conclusions, yet is there the opportunity of starting from its results, and making its conclusions subservient to further advances. It may be rendered directly instrumental in the solution of some of the most interesting and difficult problems within the whole compass of the sciences. Indeed, through no other process is it practicable to obtain a position, from whence some of the highest points in philosophy may be brought within the range of direct examination.

There are many questions, involving the highest speculative and practical interests of mankind, which stand precisely in this condition, that they receive a ready assent in the common conviction, and control the universal conduct of the world; and yet when this universal assent is carefully examined, and the effort is made to trace the convic-

tion up to its original ground, it is found to rest wholly upon assumption. All attempts to elucidate the correctness and to settle the validity of such convictions, are soon found to be utterly impracticable except through some process of a rational investigation. All experimental processes must fail, for the point of difficulty lies beyond experiment, even in that which is conditional that there may be any experience. The attempt to forestall all such inquiry by affirming that such convictions are themselves ultimate facts, and not possible to be made any clearer by any efforts toward a higher investigation, inasmuch as these convictions are themselves the highest point of possible attainment, can not afford any satisfaction to philosophy, since it is really but affirming that all philosophy and science are impossibilities, and all knowledge is but a resting at last on mere arbitrary foundations. All that can be done is to say that so it appears, and as appearance gives this conviction which is our ultimate fact, we affirm that so it *is* ; and here we must stop short in all attempts to rise to any higher position where we may further affirm so it *must be*. When any one speculatively doubts the validity of these facts in experience, or even assumes to have proved them to be fallacious, there is nothing that can at all be answered, except still to urge this fact of universal belief from common sense, including the skeptic himself, and there rest as having reached the ultimate point of human attainment, and leave the skeptic to his doubts if he must still be so philosophical, and so little under the dominion of common sense, as to have them. The empirical philosopher and the reasoning skeptic, it is quite manifest, may here stand the one over against the other in perpetual contradiction, hopeless of all

reconciliation and agreement. Their respective positions perpetuate the everlasting conflict of two counter-assumptions; one, that the convictions of common sense are ultimate; the other, that reason goes beyond all experience, or at least goes against it and falsifies its convictions. On his own premises each may maintain his own conclusions, and yet neither can go back to the assumption of his antagonist, and obtain a final triumph by demolishing it.

And now, some of these very questions may be brought within the scope of a clear examination, from the position to which a Rational Psychology reaches. Having gained its own end, and given the human intellect as determined in a demonstrated science, it may be used for the further purpose of settling the conflicts of these counter-assumptions; nor will it be practicable to make any thing else subservient to such a desirable issue. And it may subserve the double purpose of illustrating the great importance of a strictly transcendental philosophy, and by overlooking the field in general give a better preparation for our future exploration thereof, if we here make a particular and somewhat extended reference to some of the more important of these questions, in the exact order in which they stand related to the conclusions of a Rational Psychology.

I. The objects given in sense are out of, and in some cases at a distance from, the knowing agent. This is especially true of the objects given by the sense of smell, of hearing, and of sight. One will suffice for the illustration of all, and as the better adapted to a clear exemplification we will take the object as given in vision. The problem which philosophy has felt herself called upon to solve is this: How may the intellect know that which is out of,

and at a distance from, itself? The general admission has been that in some way the object must affect the sensible organ by impulse. An impression is thereby made upon, or an affection produced within the organism, which by its nervous susceptibility perpetuates the affection and communicates it to the brain, and through the brain the affection is carried up to the point of its communication with the intelligent spirit, and there in the secret penetralium of the spirit's dwelling-place a junction is formed between the invading impulse and the receiving intellect, the mind thereby attains its knowledge of the object, and the process of perception is completed. But, inasmuch as nothing can act except where it is, and when it is; and the object is not where the point of the mind's receiving agency is, but sometimes at a great distance therefrom; it follows that there must at this point of perception be some *representative* of the distant object. This representative is what is directly perceived, and by it the distant object is made known. Such a theory modified in minor particulars by different philosophers, induced the necessary conclusion that all knowledge of an outer world is mediate, through representatives of its objects, and never direct as an immediate perception of the objects themselves.

In the investigations to which this theory of representative perception of objects was subjected, many perplexing queries arose, and different philosophers answered them, each in his own way, as he best could. What is this representative of the outer object—a spiritual or a material being? Is it an image of the object as excerpt and detached from it? or originated in the brain? or in the intellect? or in some media between the object and the

organ? Does the representative at all exist when the mind is unconscious of the perception? May it not be a direct creation and infused into the mind by divine agency? Yea, may not these representatives be in the Deity, and identical with the divine essence, and that thus, according to the theory of Malebranche, "we see all things in God?" But however these connected queries may have been answered, the general doctrine of perception remained, that not the object but some representative thereof was immediately given to the sense. From this a two-fold skepticism naturally arose, one or the other face being presented according to the side on which the theory was carried out to its issue.

On one side, this theory of mediate perception gave occasion for a skepticism in reference to the reality of all external objects. How can the correctness of our perceptions be at all determined? If we say the representative is like the object, it can be only a mere assumption, inasmuch as no comparison can be instituted between them, for the representative only is given; and if by any means the object could be attained for a comparison, then would the representative and all comparison with it be wholly superfluous. Yea, inasmuch as the representatives are all that the intellect possesses, how is it possible that we may know that any thing other than the representatives really exist? The representative is indeed the only object in consciousness. Berkeley's argument is still more stringently drawn. All that can be known is through the mediate representations of sensation; and all that can come within consciousness is the sensation itself; and this sensation as wholly mental can have no likeness to any material objective being.

To suppose that mental sensations and material objects can resemble each other would confound mind and matter together. The conclusion, in his own language, necessarily follows: "The existence of a body out of a mind perceiving it is not only impossible and a contradiction in terms, but were it possible and even real, it were impossible that the mind should ever know it."

This conclusion of Bishop Berkeley was not at all the offspring of a religious skepticism. By giving up the knowledge of an outer material world and holding on to the knowledge of an inner mental world, he assumed that the skepticism in religion, which follows so readily and in his view so necessarily from the theory that inert matter can become a mental idea, was wholly avoided. By excluding all knowledge of matter he thought to save the knowledge of the soul, and thereby a firm ground for the doctrines and duties and immortal hopes of religion. And thus it was that on this side, the doctrine of mediate perception terminated in *Idealism*—or, more correctly, *Sensationism*—which denies all knowledge of the reality of objective being, save as it exists in the sensations of the mind itself.

On the other side, this theory produced to its issue attains to a skepticism still more startling. The impression made by the outer object, and acting upon the nicely arranged organism of the sense, puts in motion the animal spirits or gives vibration to the nervous and cerebral filaments, and thereby propagates its peculiar motions and manifestations onward to the sensorium, in which the sensation becomes perfected in a complete perception. But, inasmuch as no motion extending throughout any material

organization may at all propagate its movement beyond what is material in the organic sphere, so there can be no possible projection of any representation of the object by such motion out of the organism and into some supposed spiritual receptacle, which as without parts must be utterly incompetent to receive or transmit any representation by impulse. The representative of the outer object can never be carried beyond the sphere of the material organization, and therefore all perception by means of this representation must be completed somewhere within the material organization itself. All perception is perfected in the subtle, refined, yet still material organism. An impinging force from without communicates its impulse to the material arrangements within, and in the peculiar modification thus given to these organic particles, there originate perceptions, feelings, and thoughts. Various explanations may be made in reference to the manner how, but all spiritual agency is excluded, from the necessity that impulses and motions must be wholly material. "Consciousness itself," says Hobbes, "is the agitation of our internal organism, determined by the unknown motions of a supposed outer world." Thought is the product of sublimated and skillfully arranged particles of matter put in motion by the representative of some outer object. To reverse the process, and begin with the completed perception tracing it backwards, will also arrive at the same conclusion after the manner of Diderot and the school of the French Encyclopedists. Every cognition when carried back in its ultimate analysis must resolve itself into some sensible representation; that which produced this representation in the sense must have come within the organization from some external impression or

affection; and thus all which may ever be in possession of the intellect, and which is not wholly a chimera, must be able to again be attached to its own original archetype. Thus on this side philosophy is forced to *Materialism*, the doubting of all but material being.

f And here we may say, that the rational psychology of sense may be made subservient to the demonstration of all that sense gives to us. Spiritual acts and material qualities can be proved truly to appear. The sense can give no mental essence nor material substance, and from its psychology we can prove the being of neither; but we may demonstrate a true appearance of mental exercises and material qualities and events.

II. There is a more important end in the destruction of a still deeper skepticism to which the results of this science may be applied, and which will be disclosed in the following remarks:

The sense is, a medium for perception in which are given the qualities of an outer, and the exercises of an inner world. Colors, sounds, tastes, etc., are revealed in consciousness through sensation; and thinking, feeling, choosing, etc., are also revealed in consciousness through an inner sense. All these accidents of an outer world of matter and an inner world of mind, as given in perception, may be demonstrated as realities from the results of rational psychology in its determination of the laws of perception. But, while much is attained for science in demonstrating the validity of our perceptions, there are still more important regions beyond, yet insecurely held in possession by philosophy. We have thus the reality of the thinking, but not the thinker; the reality of color, but not the thing colored.

The accidents are known but not that in which the accidents inhere. All qualities as given in sense stand disconnected, and can not by perception alone be put together in their existence as the common properties of one and the same subject. I perceive a redness, a fragrance, a silky smoothness; but I do not perceive through sense that in which they all inhere as one thing—the rose—so that I can say I perceive the rose as a thing in itself, and then moreover perceive that the rose is red, fragrant, smooth, etc. I perceive in the inner sense that there is a thinking, feeling, and choosing; but I do not perceive the mind, and then perceive this one mind to think, feel, and choose. It is only through a discursive judgment that I can connect them in one common subject; and the sense does not *judge*, it only *perceives*. It may be made valid for real *qualities* and *events*, but it can never attain *substances* and *causes*.

And now, it is by these notions of substance and cause that we can extend our knowledge at all beyond the mere isolated qualities as they appear in sense. We put the several qualities, not merely into one group as in the same place, but into one substance as existing in the same thing; and also the events, not merely as successive in a time, but as originating in one cause as the same source. And when we thus connect qualities and events as *perceived*, in their notions of substance and cause as *understood*, we may then greatly extend our knowledge in several ways. Had we the faculty of perception through sense alone, we could merely attain the *predicates of qualities*, as less and more, like and unlike, outer and inner, antecedent and consequent, etc., and which stand only in the conjunctions of space and time; but by the faculty of the understanding which con-

nects qualities as existing in things, we attain these qualities as the *predicates of substances*, and thereby a great enlargement of judgment is effected.

Thus, in my notion of substance in which the qualities inhere, I have the conception of *body*; and by simple reflection upon this conception I can say that all bodies must have extension, figure, position, divisibility, impenetrability, etc., as *primary* qualities. And in the same way in my notion of cause, I have the conception of an *agent* and by merely reflecting upon this conception I may say that all agents must have force, activity, passivity, etc., as their primary attributes. And in this I have not merely predicates of qualities, but predicates of things. And then moreover, I may add to such *things*, all the qualities which the perceptions of the sense can attain, as their *secondary* qualities. Thus of some body—gold—in addition to the primary qualities common to all bodies, I may say from the perceptions of sense, that it is yellow, fusible, malleable, soluble in aqua regia, etc.; and of some agent—the sun—that it has not only the primary attributes common to all agents, but also that it imparts light and heat, melts wax, hardens clay, converts liquids into vapor, etc. In this way I may enlarge my knowledge of things as far as I may extend my perceptions, and know not merely appearances as perceived, but things as understood. And much further still; I may say that like substances have like qualities; and that like causes produce like effects; and may then classify nature through all her genera, species and varieties; and also by an induction of similar facts conspiring to one end may deduce general laws, and thus extend my conclusions

not only to embrace what I have perceived, but all that it is possible should be perceived in nature.

Here is the basis of Inductive Science. I assume this uniformity in the substances and causes of the universe, and thus conceive of nature as bound in harmony by universal laws, and have then no difficulty in concluding from what is, to what will be; and from what I have perceived, to what perception could any where give in any experience. I may take some hypothesis, and using this for the time as if it were the true law of nature, I go out to examine and question nature through all her works. If I find her answers quite contradictory to my hypothesis, I throw it away as worthless and false; but if I find her answers in conformity with my hypothesis, it is hypothesis no longer, but a veritable law of nature, by which she is henceforth to be interpreted through all her secret chambers. I may, again, be observing the casual facts of nature as they arise promiscuously around me, and with the conviction that there is some law of order though wholly as yet undiscovered, there may from some conspiring incidents perhaps, a thought sudden as inspiration flash upon my mind, in which the whole complexity of facts is put at once in clear and systematic unity. So Harvey, amid the promiscuous facts of anatomical dissection, notices the valves which open and close within the different chambers of the heart, and as the concurring facts appear, that these valves are so arranged that they may admit the blood coming *from* the veins, and then with every pulsation send it through the lungs and onward *to* the arteries; instantaneously, the fact of the circulation of the blood in the animal system, and the law for it, are clearly apprehended. So, also, the falling apple

might, as is sometimes said it did, suggest to Newton's wakeful thought the universal action of gravitation. That force of attraction which brought the apple to the earth, manifestly reaches much higher than to the bough from which it fell; why not then to the height of the air, and hold to the earth its surrounding atmosphere? Why not to the moon, and control her changes? Yea, why not act from the sun through all the system, and hold each planet in its orbit? A careful induction confirms the supposition, and determines the ratio of the force, and at once the law of gravitation is assumed to pervade the universe. The revolutions of the furthest planet and the wandering of the most eccentric comet are subjected to its control.

But here, the grand inquiry essential for all knowledge, both in the particular things of experience and the general judgments of induction, is to be made and answered. How shall these notions of substance and cause be verified? It is not sufficient that the perception has been plain, nor that we have been careful to secure a broad induction of facts before we have defined the particular thing, or deduced the general law. Such considerations are important merely in reference to the *modus operandi*, and the determination of the correctness of the process. We need to go back of the process, and examine the conditioning principle. How do we attain the validity of substance and cause? How do we determine their uniformity? By what right do we assume that nature has universal laws? That in a large induction of facts such an order has been found, will not be ground sufficient to conclude, therefore, this order is necessary and universal—experience has been thus hitherto, therefore it must be such evermore. Experi-

ence itself is based upon the connections of substances and causes, inasmuch as without them, all perception is only of the isolated and fleeting qualities and events with nothing to connect such in a unity of nature; and here we have not only assumed them for connecting qualities into things, but also have assumed their uniformity for connecting things in a general law of nature. Have we, then, a firm ground on which to stand, when we thus attempt to go out beyond the province of the sense? The grand question is, how come we by the notions of substances and causes? and especially, how come we by their perpetual order of connection? The results of reflection; the truth of experience; the validity of all thinking in judgments; and the entire superstructure of inductive science; all rest entirely upon the answer which may be given to such a comprehensive inquiry. If we can find a firm foundation on which to rest an affirmative in this matter, then is a science of experience and of nature possible; if not, the most that is within our reach is probability and belief, and the whole region of Natural Philosophy is open to the skeptic.

But from the philosophy of sensation, according to the system of Locke, no such foundation can be attained. Sensation is the medium for attaining qualities; and by comparing, abstracting, or combining these, we may attain such predicates as greater and less, even and odd, likeness and unlikeness, etc., in which the subject must always be the quality according to its modifications; but certainly, no such modification of the quality can attain to a subject for it, and put the quality in a judgment as the predicate of such subject. The substance and cause are not at all given in the sensation, and can not possibly come within the light of

consciousness; and it would be wholly an illusion to suppose that because in our thinking we have the notions of substance and cause *with* the qualities perceived by sense, therefore they have been given *in* the qualities as perceived, and taken by an abstraction *out of* them. They are no modifications of, nor abstractions from, the qualities and events as perceived through sensation; but are themselves the conditional grounds for all qualities and sources for all events, and are wholly out of and beyond all that can be made to appear in our consciousness. And yet, taking this illusion as a reality, and assuming thence that substances and causes are given in sensation and taken by abstraction from it, this philosophy is forced to convict itself of the further absurdity, that what is given in sensation may be taken as a universal law reaching beyond what has been perceived, and determining how that must be which has not been perceived; inasmuch as it assumes a universal uniformity of their qualities and effects, in the like substances and causes.

Hume, resting upon the basis of the philosophy of sensation, saw this inconsequence very clearly, and established a skepticism thereon utterly impregnable to any attacks from this philosophy. All that can be known is given in sensation; and this is solely "impressions," or the less distinct "ideas," which are the copies of the impressions in reflection. These "impressions," which include all our primary sensations, and in which we have all the qualities of an outer world and all the exercises of the mental world, may follow consecutively, and in these sequences we may determine an antecedent and consequent, but the mere sequence is all that is given. No reflection upon

the sequence can attain to any causal *nexus* which necessitates this order of antecedents and consequents. Such sequences *are* and *have been* together, but in this there is no possible ground for the conclusion that they *will be*, much less that they *must be* together hereafter. This efficiency, as necessary connection, is not in the "impression" as attained in sensation, and hence no reflection can attain to causation as the "idea" or copy thereof.

This most acute of all skeptics both saw and admitted the fact, that the human mind in some way attained the seeming conviction that this connection was a necessary one; and yet, as manifestly such could not be given in sensation, and therefore could not be knowledge, he quite ingeniously and as philosophically as the system of sensation will admit, attempts to account for such conviction. It is solely the result of habit, from the frequent repetition of the impression of the sequences. We become accustomed to such an order of sequences, and the repetition at length makes so vivid an impression that it becomes a settled "belief" that it is necessary and universal. But the philosopher who has investigated the grounds of this belief, plainly sees that it is wholly destitute of all validity. It is a mere persuasion induced by habit only, and from the very sources of all knowledge in sensation this must be utterly excluded. Skepticism may here take up its position unmolested at the very basis of all reasoning from effect to cause, and in the very foundations of the Inductive Philosophy. It is not possible that we should know nature to have any laws in her successions; we can at the most have only persuasion and belief, and the philosopher sees that this

is all induced solely by a mere repetition of a particular order of sequences.

Precisely the same philosophizing in reference to substances induces the skepticism of any permanency in the being, as above of any necessity in the order of events. The substance is as impossible to be given in sensation as is the cause. We have such qualities grouped together, and it may in the same way be explained that inasmuch as we have so often seen them together, we come at length to the conviction that they are necessarily together, and that there is some common permanent substance in which they inhere. The philosopher knows that there are only the qualities of redness, fragrance, softness, etc., together in the sensation, and that the substance which we call a rose is nothing but the grouping of the mere qualities in the sense. These qualities of matter and the exercises of mind, as given in perception, are perpetually arising and departing in the sense, and have no other ground of connection than "a divine constitution." The qualities appear, perpetuated in certain groups; and the exercises appear, prolonged through certain series; but sense can give no permanent substratum, and all knowledge that there is a permanent body, or a perduring mind, is alike impossible.

The demonstration which we may gain from the psychology of the Sense goes, thus, but a little way in effectually overthrowing the skepticism of either Sensationalism or Materialism, for while it proves that perception gives real phenomena, it leaves the whole question in doubt whether the mental exercises have any abiding source, or the material qualities any permanent substance. There may

be veritable organic sensations, but that can determine nothing about an outward world of material substances as object beyond phenomena.

But a more incorrigible skepticism still results from this theory when comprehensively examined and intrepidly prosecuted to its legitimate conclusions. It is the testimony in the convictions of universal consciousness that we perceive immediately the external objects themselves. Every man is convinced that it is the outer object, and not some representative of it, which he perceives. The knowledge that the object is out of myself, and other than myself, and thus a reality not subjective merely, is the testimony of common sense every where. All minds, that of philosophers as well as common people, are shut up to the testimony of consciousness for a direct and immediate perception of the outward object. The skeptic himself admits, yea, insists upon this, and founds upon it the necessary conclusions of his skepticism, rendered the more invincible thereby from the contradiction which follows.

For when the unexamined convictions of consciousness, as direct for the immediate perception of an outer world, are brought to the test of philosophical investigation as above, the demonstration comes out full, sound, and clear, that all such immediate knowledge is impossible. The very sensation through which the knowledge is given is wholly mental, and at the most can be determined as only representative of the object, and not that it is that object itself. It is not possible to affirm beyond the immediateness of the organic sensation; and all that can directly be known is, that the mind has such sensations, and this it may deem to be a perception of an outward object, but the reason attains

the irrefragable conclusion that the sensation only, and not the object as external, can be immediately in the consciousness. A demonstration of reason, thus, concludes directly against the testimony of universal consciousness. And now, where are we as intelligent beings? Consciousness contradicts reason; the reason belies consciousness. They are each independent sources of human knowledge; unhesitating conviction must follow a clear decision of either; and yet here they openly and flatly contradict each other. The nature of man as intelligent, stands out a self-contradiction. From the very light which is within us, we are made to conclude that light itself to be darkness, and thus all ground for knowledge in any way is self-annihilated. The truth of our intellectual nature is itself falsehood, and there remains nothing other than to doubt universally. This is the dreadful, but from the philosophy of representation in sensation, the unavoidable conclusion of David Hume; and here we come out to a necessary *Universal Skepticism*.

Reid, more especially to counteract the last, but equally as defensive against all the above forms of skepticism, introduces here his theory based on the assumptions of *common sense*. Rejecting all notion of any representation in perception, and imputing all such conclusions to the wandering and delusive speculations of philosophy, he takes the universal decision of common consciousness on this subject to be true—that we immediately know the outer material world in the perceptions of sensation; and forestalls all contradiction, by denying all validity to any speculations which attempt to reach back beyond such decisions of universal consciousness. Wiser than all philosophy; higher than all

speculations of the reason; further back than any demonstrations can be allowed as valid; this decision of common sense is the first thing given, the ultimate truth in which all philosophy must begin, and on which all demonstration must be dependent, and which is never to be disputed. He thus saves himself from all skepticism as above, in any of its forms, by denying their fundamental assumption of a mediate perception, and assuming that the human intellect was so made as to know the outer world immediately.

Here, then, are two counter-assumptions standing one over against the other, nor can one demolish or be demolished by the other. One assumes that sensation can be none other than a representative of the object in perception; the other assumes that sensation gives the outer object immediately; and here they both stand on their ultimate positions. Neither can attempt to go back of their assumed ultimate truths, neither will admit that the assumptions of the other are clear in their own light and self-affirmed; and thus neither may fortify his own position nor assail the opposite, and each can stand upon his own ground and defy all the logical and metaphysical artillery of his antagonist.

And now, surely nothing can avail here, that only attempts to sharpen the senses, or exactly to apprehend appearances. These notions of substance and cause can never be made to appear. No possible functions of the sense can reach them. Unless we can transcend all knowledge from sensation, and attain to these notions as wholly new conceptions in reflection, and verify them in the higher functions of an understanding as having a valid reality of being, we can not exclude the skeptic from his logical right

to doubt whether permanent mind or matter exists, or whether even he must not doubt universally. This, then, is a further use to which we may, perhaps, in the end find the results of Rational Psychology to be subservient. If we can come to the knowledge of the understanding in its conditioning laws of operation, and determine to the intellect, in its process of thinking in judgments, an equal validity as before in its process of perception; then may we from such results demonstrate also the validity of their being for the substances and causes of the understanding, as before for the phenomena of the sense. And such verification of the being of substances and causes, and their uniformity as universal laws in the connections of nature, will be an annihilation of all skepticism of mind or matter, and do away with all apparent conflict between consciousness and reason. And most surely such a consummation is hopeless, in any other manner than through an *à priori* method of investigation.

III. A more serious difficulty than any which we have yet encountered remains still behind, and needs to be obviated. The following order of thought will bring this difficulty to light, and disclose the use which may be made of the results in Rational Psychology for its removal.

In the circumscription of all knowledge to that which is given in sensation and the modifications which may be made thereof in reflection, the necessary and universal connections of cause and effect are left to rest wholly upon assumption. Hume is manifestly consistent with the fundamental principle of the philosophy of sensation, in denying to human knowledge any thing in cause and effect beyond simple antecedent and consequent. No science can be based upon the universal laws of nature, for it is impossible from this

philosophy to go any further than probability when it is assumed that nature has any universal laws. Hume recognizes the fact that the human mind does, in some way, attain the conviction that the events in nature have a necessary connection, and that the order of this connection is uniform and invariable. This conviction is far from knowledge, and is at bottom only credulity, growing out of the frequent repetition of the sequences in our experience, and therefore a belief from habit merely; yet does it become complete and controlling, and impossible to be counteracted by any thing but the most irrefragable demonstration.

Hume's argument against the possibility of proof for a miracle as an interruption of the order of nature, the necessary connection of which has such complete conviction in the human mind, is really unanswerable upon any empirical grounds. There must ever be a stronger conviction against the miracle than there can be persuasion for it. The supposed interposition of a God out of nature, who for good reasons interrupts the order of nature, is wholly gratuitous on the ground of this philosophy, inasmuch as all argumentation from the connections of cause and effect must be wholly inadequate to conclude upon the existence of such a being. The conviction that a God is, can at the most rise no higher, and be deduced from nothing other than the conviction that nature is uniform in her sequences; and then, to assume a Deity whose existence might make a miracle possible can surely have little weight with the philosopher, who very distinctly sees that both the Deity and the miracle must rest upon contradictory data; the existence of the Deity upon an argument from the invariable and unbroken order of causation, and the miracle itself a **fact**

which is a direct subversion of this invariable order. Such skepticism in reference to all pretences that miracles have been wrought is utterly incorrigible, except through some other discipline than that which may be administered by any empirical philosophy. The skepticism is legitimate from the premises; the sophistry has been on the side of such as have kept the philosophy and yet attempted to answer the skeptic.

But this skepticism in regard to miracles, and to the being of a God who might work miracles, sustained, by the controlling conviction that the order of nature is uniform, and yet the conviction so controlling demonstrably only a credulous illusion, becomes a demonstrated pantheism or a demonstrated atheism, in several processes of argumentation from the partial premises of different philosophies. The philosophy of *sensation* has ever tended directly on towards universal materialism, and ultimately through fatalism to blank atheism. With Locke, there was the distinct and clear admission, that while sensation was *passive* in the reception of objects from without, yet was there an *active* principle for reflection within; and that these active faculties constructed a multitude of complex and abstract ideas out of the materials furnished by the senses. And yet, inasmuch as reflection could have nothing to do beyond merely elaborating that which was given in the senses, it must necessarily have confined its whole work to that which was wholly within the real forms of space and time. Its tendency to Materialism and Fatalism may be correctly traced in England through Hartley, Priestley, Darwin, and others. But in France, the more marked issue appears. Condillac so modified reflection as to make it the

mere self-consciousness of the feeling given in sensation; and then shows that every faculty—attention, memory, comparison, judgment, and even the will and all our emotions—may be accounted for as modified and “transformed sensations.” The passage from this was easy and sure to a complete material mechanism in all the phenomena of our inner being, until it attained its compound of Materialism, Fatalism, and Atheism in the conclusions of d’Holbach, D’Alembert, and the French Encyclopedia, where man, appears as only a combination of material organizations; his intellectual being the mere development of necessitated sensations; his morality the impulse of self-gratification; his immortality going out in the dissolution of his bodily organism; and his God the mere personification of nature in her blind operations, which a diseased fancy and a superstitious fear had elevated to universal dominion.

On the other hand, the philosophy of *rationalism* has tended towards absolute Idealism, and ultimately to Ideal Pantheism in the opposite direction. With Kant, in his speculative philosophy, there is reality given in sensation, and here is truly all the *material* of knowledge; but this can come into our cognition in no other manner than according to the *formal* conditions of our subjective being. All, therefore, that we can know is the phenomenal only, and as these phenomena are connected and generalized into a Soul, a Universe, and a Deity, they are but the modifications of the material given in sense reflected through the regulative forms of the subjective understanding and the reason. We can not demonstrate that there is any objective being as the correlative of our formal thought, nor can we demonstrate that there is not such objective valid

reality. Ontology, in reference to the Soul, Nature, and God, must be left to opinion and faith, and can never become science. Phenomena are, as valid realities; but what they are in themselves, and only as our formal faculties represent them in our own subjective apprehension, no philosophy can possibly determine.

The way was thus open for Fichte to deny the reality which had been assumed here for the phenomenal, and to show that the phenomenal was as truly a reflection in the laws of our subjective being, as in Kant's philosophy had been proved for the Soul, Nature, and the Deity. Thus, instead of admitting with Kant, the being of our formal subjective intellect and the reality of the objective phenomenal matter, Fichte contends that the last is mere opinion and can not be demonstrated science, and that thus only our formal subjective being is that with which we must begin, and on which all philosophy must rest. And now, by the mere process of thought, the way is to be shown from this subjective being alone, out to all our ideas of the universal and the absolute. The subjective, as self or Ego, by thinking, attains to that which limits itself by the laws of its own being, and wholly prevents the action from going out uninterruptedly and losing itself in the infinite; and such necessary limitations in our activity we take cognizance of, objectify in our consciousness, and deem them to be the phenomena of an outer world. Another step is then taken, by recalling our activity from these limitations in our thinking which we have made to be outward phenomena, and thus in reflection we come to apprehend our own activity and attain the contents of our consciousness, and here determine that the mind itself is the whole sphere of

its operations, and that its activity can do no more than to objectify its own limitation in its own laws, and then come back and find itself as the subject of its own acts and the object of its own consciousness. All possible theoretic or speculative knowledge is thus wholly subjective, and embraced within the sphere of the Ego only.

Schelling transcends the subject and the object in Fichte's philosophy, and assumes an absolute Ego as the primal self-existent being. Out of this, by one act of a disreptive or disparting movement, both the subject and object are simultaneously given. This absolute being is quite back of all that can appear in consciousness, and can be known only in a purely "intellectual intuition," but which in a determined logical movement develops itself into the unconscious world of *nature*; the conscious world of *mind*; and finally, to the knowledge that all of nature and humanity are but the products of this logical movement, and which self-knowledge of the all-embracing movement gives the developed *Deity*.

As the acorn has within it potentially the mature oak, or as the egg is potentially the complete fowl, so it may be illustrated has Schelling's absolute being potentially within it the world of nature, of humanity, and of a self-conscious, all-embracing Deity. The living force in the acorn, or the egg, is not the oak or the fowl, but it may be contemplated as passing out in a determined developing movement, and when in utter unconsciousness, the successive statements in the process are the growth of nature; so far as it may be conceived that it has come to feel its own movement, it has the sentient life of the animal; and when this self-feeling has come through reflection to a discriminating self-conscious-

ness, the development has reached to the stating of humanity. When this further comes to know itself as the all-embracing source of nature and humanity, and that it identifies in itself all of the objective and subjective being in the universe, the true Godhead is evolved and the realized Deity is therein attained.

But even this identification of the subjective and the objective in the absolute is still so far thoroughly objective, in that the developing process is contemplated as taking place before us; we are looking on this living movement, and the whole result in nature, humanity, and evolved deity stands out face to face with us; and thus with both Fichte and Schelling there is an unresolved dualism. The Ego develops itself before a spectator who is wholly outside of the process and altogether inexplicable by the philosophy. Whence comes, and where goes, and who is this observer that looks on both subject and object and the living process evolving them?

Here Hegel interposes his method and we have a modification of the critical philosophy which completely exhausts all analysis and abstraction and consummates its entire mission. This living process is taken as a thinking movement and assumed to be a pure logical act exclusive of any subsisting actor, and then instead of standing outside and looking on, we are made to stand in and identify ourselves with the movement. There is no outside spectator, but solely an inner witness; and this inner eye does not look forward and forecast, but solely opens in consciousness to the present position. What is successively given is retained, and the last is so combined or "suppressed" in the former, that the successive statements are posited in perpetually riper and

riaturer being as the development progresses. This whole dialectical process is most profoundly and elaborately exposed, and the World, Man, and God are successively given to recognition as the seeing eye opens upon the different stages of the logical movement.

But when we make this philosophy to awake from its dream of development, and ascertain its results, it must perforce find that it has ensphered all things in a transcendental pantheism. Thinking and being are the same. The process of creating is the order of logical thought. Every object is an ideal product, and nature and humanity are but the development of the one living process of thinking, the aggregate and consummation of which becomes the completed Deity.

A philosophy exclusively based upon either the objective or the subjective is necessarily partial in its very beginning, and must eventuate when carried to its legitimate issue, in one-sided and therefore erroneous conclusions. The philosophical speculation on either side must follow some law of order, and if it be the law impressed upon the objective in its development of cause and effect, it must ultimately absorb all things within the workings of a mechanical necessity; and if it be the law which directs the subjective development of thought, it must in the end involve all things within the rigid conclusions of a logical fatality. A comprehensive survey of both, readily determines what must be the landing place of each.

Let the *objective* be the starting point, and the observed facts in their law of experience must give direction to all investigation. In following out such investigations, physical science will be greatly promoted; the laws of cause and

effect in astronomy, chemistry, physiology, geology, etc., will be followed out to their furthest traces in human observation; and practical utility and social expediency will be the ground-springs of human action. But such a philosophy has at length only to open the eyes and look around from its position to determine its own interests, and it must find itself fast bound within the chain of a fixed causation, and shut up within the prison of nature hopeless of all deliverance. Without some salient point in nature, from which, *salutem mortali*, we may fairly project our philosophy beyond nature, then must our whole being perforce content itself to abide within nature, and take the destiny of nature; and the man must recognize himself and all that is about him, as separate links in the same indefinite chain of coming and departing events, each in its destined place fulfilling its own mission, and all constituting a progressive series of necessitated successions which is both unalterable and interminable. We can know nothing beyond nature, we must conclude that there is nothing beyond nature to be known. The positivism of Auguste Comte is the natural and necessary result.

And here, let it be most gravely inquired, if there be not some long-standing and far-famed theories in metaphysics among us, which must infallibly terminate in the above conclusions, whenever they shall be resolutely pushed onward to their consequences. A philosophy which includes in the same category of causation the changes in matter and the originations in mind, though it may use the qualifying terms of a *natural* and *moral* necessity, but which still do not mark any discrimination in the *connections* but only in the *things* connected, must, unavoidably find itself within the

charmed circle out of which there can be no escaping. It is not possible that such a theory can vindicate for the human soul in its immortality, nor for the Deity in his eternity, the possession of any attributes which may rise above, or reach beyond, the interminable conditions in the linked series of a fixed causation. An assumed God of nature must be but nature still, evermore stretching the chain onward.

Let, on the other hand, the *subjective* be the starting-point, and the logical order of thinking in judgments must be the law for our whole process of philosophizing. And here, doubtless, great progress will be made in intellectual science; and the most abstract thoughts, and fine-spun distinctions, and broadest generalizations, and most subtle analyses, will be distinctly seized by the human understanding, and carried out to the most profound demonstrations. But such a philosophy, again, has only to lift its eyes from its minute and critical examination of the goings-on of subjective thought within, and look out upon the bearings of its course, and it must find itself plunging into an abyss of abstractions empty, and bottomless; from which there is no escape until itself, the soul, nature, and God are all lost together in an Idealism which ultimately vanishes in nihility. So long as anything remains, the laws of thought must be there, and they are as rigid in their consecutive developments as the fixed ongoing in the successions of nature, and must bind the soul and the Deity within the same logical necessities. But even these exist only from sufferance, and must be as truly ideal as the thoughts induced by them; and thus both law and logical process of thought, together with all of nature and the absolute to which they had

attained, await only that sweeping abstraction which abolishes the whole ideal vision forever.

There are two other methods taken in dealing with this question of finding an Absolute Deity, neither of which can bring any relief against speculative skepticism, and yet both are frequently used with much confidence ; these are Eclecticism and Mysticism.

Eclecticism anticipates that there will be found truth more or less in all methods of philosophizing, though oftentimes partial, obscured, and distorted, and it essays to sift this truth from the error, and with this pure residuum of all systems build up the only and altogether true. And now, undoubtedly it may so far be yielded to such a theory as to admit that few philosophical systems can be wholly wrong ; that truth from any one must be consistent with the truths of all others ; and that the only and altogether true system of philosophy must be competent to find a place within its comprehension for all philosophical truth ; and also, that if all the truths of all philosophical systems were discriminated from the errors of all, and this in combination with all other truth was harmoniously bound up in one system, it would be a true comprehensive philosophy.

But how shall we go on with this sifting process, and detect all pure truth and take it out from all other systems ? Certainly this can in no other manner be done than in first having already some system of our own and taking our stand upon it, and applying its law of construction to comprehend all that is true in all others, and thereby vindicate its own right to be and to take that which demolishes others in building up itself. It can not be allowed that the true system shall be some arbitrary patch-work by selecting and

appropriating assumed truths here and there, but it must have its own law of construction which can of right claim all truth, because it can put all in its own place and legitimate its possession by a universal and harmonious colligation. Eclecticism can not thus begin its work of taking truths from other systems, except by already possessing and bringing with it its own comprehensive law to vindicate its title to what it takes, and not by arrogantly plundering what it may covet.

This is the professed theory of Cousin, and he holds that in all correlative objects, the knowing of one gives in that the knowledge of the other. The knowledge of the finite and of the relative gives at once the knowledge of the infinite and the absolute. To know finite causes is therefore at the same time to know an infinite cause, and to know relative causes is thereby to know an absolute cause; and the knowledge of the relative and the absolute cause, gives also, at the same time, the knowledge of the difference between them. He thus conditions all things upon an absolute cause, and affirms that as cause it must of necessity go out into effect, though he assumes that the absolute cause is not all exhausted in the effect. The universe, it is affirmed, is as necessary to the Deity as the Deity is to the universe. The assumed absolute cause is made at once a conditioned cause, and as truly necessitated to nature as the cause is to its effect in nature. An inevitable pantheism is also involved, for nature is but the absolute produced forward into its effect, and if it does not exhaust the absolute, it is yet so far forth a portion of the absolute cause produced onward into nature as effect. It is, therefore, aside from its unphilosophic assumption of the *knowledge* of the

absolute in the relative merely because the absolute is *suggested* by the relative, still as truly fatalistic and pantheistic as any system which it has been assumed to supplant.

Mysticism wholly despairs of any help in reaching to the supernatural and finding the being and attributes of God by any intellectual process. Suppressing all speculation, the Mystic relies wholly on internal impulses and mysterious impressions. From the inner prompting of his own immortal spirit, he verily believes that there is living and conscious being within the dark region of the supernatural, but he distrusts all proffered help from philosophy and leaves the intellect to work out its problems in physics, and weave its syllogisms in dialectics, and vainly to exercise itself in the endless speculations of metaphysics. He may study nature in the facts of experience, but he will not think nor reason any further. He turns to some inward illumination, and confides in some suddenly imparted sentiment or impulsive feeling which will convey to him an immediate knowledge of the mysterious spirit-world. This may take on very varied forms of working. It may be the philosophical mysticism of Jacobi, where all is made to rest upon an ultimate and absolute feeling of belief, and in which this ultimate faith-principle is taken up and its workings attempted rationally to be accounted for, and all its results subjected to an exceedingly elegant, ingenious, and extended analysis: or it may be the enthusiastic impulses of Peter the Hermit: or the fanatic persistence of Ignatius Loyola; or the credulous revealings of Fox's inner light; or the profound rhapsodies of Jacob Boëhme. The immediate organ of knowledge in all is an inner and inexplicable

feeling of faith, with which the intellect can have little communion, and whose process of revealing is as mysterious as the beings it reveals.

Without questioning how and whence the revelation is to come, or at all testing by the judgment the inspiration when given, the man turns himself reverently toward the dark unknown, and in silent contemplation waits with confiding expectation for the message to be delivered or the vision to appear. The excited workings of his own spirit transfer their products to this dim region of the supernatural and his inner sympathies and imaginings become to him objective realities, and the spirit-land is made to be the scene of such ghostly communings as abound in the credulous experiences of Emmanuel Swedenborg. Nor are all these illusions wholly empty chimeras. They have their actual being in the inner life and spirit of the man himself, and come as a reflection from that which has been a true possession in the immortal soul. As possessing any objective significance and value they are wholly meaningless and worthless, but subjectively read and interpreted, they contain a very important lesson for philosophy to study and expound. But while there may be reflections and indices of much that is true in our subjective feeling and experience, yet can we never rely upon this inner working as any inspiration or revelation from the supernatural world. They have their whole origin and characteristic from the interior life of the deluded man, and are to be interpreted as wholly that which comes from him and not any thing that comes to him. A divine message through some form of supernatural inspiration will never leave its vindication to mere credulity, but will always have such a stamp and seal

upon it as must carry to the reason the full conviction of Heaven's authority.

There may also be noticed that which has become an *English form of German Transcendentalism*, and which has its modifications in the writings of distinguished names both in Great Britain and America. Without going profoundly into the speculations of the leading German thinkers or adopting their method, and indeed rejecting their complete subjective idealism, there is a retaining of the entire theory of a development from some supposed and assumed absolute source, and that this development is through an interminable process according to an internal and determined law of movement. Nature is not a medley of shifting phenomena, but an orderly unfolding of events according to an inner and fixed law of progress. Rising above the philosophy of sensation, and clearly aware of the empty and dead mechanism in which that philosophy must terminate, it admits of living forces and laws in nature, and strenuously contends for the authority and validity of philosophical investigations and demonstrations in reference to this orderly and progressive development. Nature is no longer viewed merely in the husk and dead shell of the phenomenal, but living powers are apprehended as working beneath and ever unfolding new forms of beauty, and perpetually progressing in its perfectibility. The laws of thought and intelligence have their counterpart in the laws of nature and humanity, and the world of matter and of mind move on correlatively in parallel lines, with even step, and never-ending progression. In all this science finds order, harmony, truth, and beauty. Life and gladness abound; and where disorder appears, it is only the result of a higher

order, for all its evils and distress teach lessons of wisdom or touch sensibilities and sympathies whose gushing emotions we could not afford to have missed. Nothing on the whole can be wrong; the progressive march of nature and humanity is as straight and rapid as possible. But here is the terminus of all thought and philosophy. The living force and work in nature, the determined progress of humanity in taste, and social refinement, and political order, and philosophical truth; these give themes of never-failing interest; but all beyond, the supernatural world, the being of a personal God and His moral government, the future immortality revealed and the divine plan of preparing sinful men for it, and His purposes of penal retribution in it; these are gratuitous assumptions, unphilosophical and indemonstrable. Science can attain to nothing beyond the correlative laws in nature and humanity, and any absolute personality must be inconceivable and impossible, and thus all inspiration and miraculous intervention is incredible. Inspiration can only be a fuller impartation to some favored sage of the universal reason, and who thus becomes the Seer and Prophet of his age, and whose oracles may live in the religious veneration of posterity until the rising reason in the race has transcended their import, when humanity again needs its new Prophet and may expect in the order of progress its new revelations.

This Transcendentalism is only partial, and its standpoint is wholly within nature. It transcends the phenomenal of the sense fairly and philosophically, and such is its deservedly great praise. But to it the supernatural is utter darkness. Not the mere absence of light but the absence of all being; the darkness of entire negation. For it nature

and humanity run on their perpetual correspondencies, and if there be aught which they do not fill it must be an utter void. It is for its adherents the part of wisdom to suppress the aspirations of the free and immortal within them, for this can be only the workings of a delusive hope or an instinctive fear, and the sure precursor of superstition or fanaticism. The reason as an organ for knowing the supernatural is discarded, and yet the philosopher calls himself a Rationalist! He shuts himself hopelessly within nature and humanity, and yet calls himself a Transcendentalist! He has so far transcended the mere phenomenal that he can give unity to nature and correspondence between nature and humanity, but he recognizes no function for transcending nature and comprehending both nature and humanity in a personal Deity. Humanity to him is in and of nature, and all the correspondencies between humanity and nature are in the necessary logical connections of the former and the physical connections of cause and effect in the latter. There is to him no free power of origination and self-direction any where. Humanity is on its parallel progress with nature, each with its destined order of development and fixed laws of movement. The world without is truly the counterpart of the intellectual world within, and here the philosopher is perpetually finding analogies, correlatives, and correspondencies, and delighting himself with the wonderful traces of harmony and beauty between them. But that which is truly free, personal, and immortal in the spirit, this philosophy wholly ignores, and between this and nature there is often the imperative for contrast and conflict. The necessities of the natural and the responsibilities of the spiritual can not be held as analogous without perpetual

absurdities and contradictions. The self-conscious and self-active can not be made to run parallel with the caused and necessitated, without introducing shocking deformities and painful discords.

And precisely in this is the ready explanation of what so perpetually appears in all the writings of this modern transcendental school. In its partiality and incompleteness, it must often give unequal representations; the *correlation* in the intellectual subjective and the physical objective will give truth, the *contrast* in the free and spiritual subjective and the material objective must give absurdity. Hence we have at one time, so much life, vigor, clearness and depth of originality, that we stand admiring and delighted; at another time, the whole is equivocal, ambiguous, and so obscurely enigmatical, that one man deems it the veracious though mysterious responses of an oracle, and another the ravings of a lunatic; again, we have comparisons so grotesque and ludicrous, that we can not choose but smile; and then, so profane and irreverent a blending of the natural and the spiritual, the human and the divine, that we ought indignantly to frown. The human, which it can know, is so often represented in the phraseology of the divine, which it assumes not to know, that the whole speech becomes utterly impertinent, and often shockingly blasphemous. The position is wholly within nature, and it is denied that there may be any projection of the intellect beyond nature, and thus if any thing be said of the supernatural it must refer to the laws of the natural, and if any attributes of Divinity are mentioned they must apply to some of the aggregates of humanity. And hence, that mixture of the meaning and the meaningless, the expressed and the inexpressible, which

so abounds through the speculations and teachings of this philosophy. Here and there gleams of light so bright and pure break out from masses of mist and clouds, as to seem almost like flashes of inspiration; and then come forced analogies so strange and wild, as to seem rather the ravings of madness.

But with all the interest which this philosophy would seek to inspire for the inner life of nature, and the faith it would cherish for the progress of humanity, it still terminates wholly within the conditions of those laws, which bind the thinking in logical sequences and outward events in necessitated successions. The Universe, the Soul, and the Deity, are all circumscribed within the iron chain of a fixed order of progress. The chain, though endless, is yet one. From the first, if any first can be, no link is independent of the others, but one exists for all and all for each, and all proper personality is impossible. The Deity is the inner force and law, which is operating as logical thought in humanity and as causation in physical nature; and by an intestine necessity works out the perpetual development, orderly, incessantly, irresistibly; yet wholly destitute alike of feeling, of foresight, and of freedom. Hence those glowing and sometimes truly sublime representations of the deep, mysterious, silent, and eternal working of this power within and around us. All things working on, and together working out their own destiny; and the changeless law pervading the whole is the God of the whole, and there is no God beyond and above this.

And now, verily, it can but little subserve the good cause, to meet this highest form of Infidelity with ridicule, hard names, and reproachful epithets. The system is the

product of severe and earnest thought, and has much of pure and high truth embraced within it. It will never permit itself to be laughed out of countenance, nor can it be beaten down by denunciation. Nature *has* fixed connections and established laws, and her inner causality *is* working out for herself an orderly and progressive development. It is a great attainment for any philosophy to have followed up the road of truth and science thus far, and to have settled the laws of nature's development upon the basis of a rational demonstration. It is the only way in which the errors originating in the limited philosophy of sensation can be met and redressed. But, while it is to its credit, that it goes thus far, yet it is itself but an incomplete and partial philosophy, and terminates in greater difficulties and deeper errors than those which it has removed. The evil is not in what this system embraces, but from what it excludes. What we need is a hardy and complete philosophy which will not stop within nature's Temple and worship only amid the products of her agency and under the authority of her laws and principles. We need from within nature, whence our knowledge must begin, some point for firm footing so high that we may overlook, and truly cast our vision beyond nature, and find an absolute and free Being who has given existence to, and who controls nature. The mind must be disciplined and the intellectual vision purified and exercised until it may clearly discern a sharp outline, discriminating liberty in personality from physical causation not only, but from instinctive impulses, and constitutional inclinations, and undirected spontaneity, and unhindered agency in one direction. A personality must be found, with a capability

to originate objective and substantial being from within himself; and to put forth his creations as other than, and quite distinct from, his own being; and who both in existence and agency shall be wholly unconditioned by any higher causation; and whose line of operation shall be determined by nothing from within his work, but wholly from an imperative out of and independent of his work, and given altogether in his own absolute being. This is essential to the idea of a personal, underived, and independent Deity; and except as we cognize the actual existence of such an absolute person, we can possibly worship none other than an "unknown God."

It is not sufficient that we leap to the conclusion, as is mostly done in all our popular treatises on Natural Theology, and thus attain only the *assumption* of the existence of such a Being—because such will very well relieve the want which we feel in our speculations to find a permanent resting place to our regressus in the tracing up of the series of conditioned effects from conditioning causes, and whence also we may begin to trace down the flowing stream of events as independent of any higher source—inasmuch as in this manner we can possibly attain to no higher than an hypothetical Deity. Our want is satisfied by such an hypothesis, and the being of nature is explained by such a supposition; but that there is actually such a God, is in this way, wholly supposititious and indemonstrable. The true idea of a God is first to be attained, viz., a being who may originate universal nature from himself, and not be himself a component or an included element, but who, though originating nature, in his personality still stands forth beyond and independent of it, and at his pleasure operates upon and within

it; and then this idea realized in this, that having in an *a priori* demonstration determined how it is possible thus to comprehend nature, we should look at nature and find there the correlative and thus the demonstrative of this idea in actual existence. The Being whom we seek to know is transcendental in the highest degree. He transcends all appearance in sensation, inasmuch as He can never be made a content of the sense and constructed into an object in consciousness. He also transcends all the notions in substance and cause in the understanding, inasmuch as while they only connect qualities and events in nature, he himself is the author of those substances and causes, and thus comprehends in his own being the very substance in its causality of all the phenomena of nature, and is thus wholly out of and beyond all the things given in the judgments of our understanding. The only faculty competent to reach and know the objective existence of such a Being must rise higher than merely to *construct* within limits in space and time, as does the intellect in sense; and higher than merely to *connect* such constructions in a nature of things, as does the intellect in the understanding; even that which can *comprehend* nature itself in an origination from liberty, and a consummation in the final ends of a free and absolute Personality; and which can possibly belong only to the functions of the reason. God is not phenomenon, nor substance and cause connecting phenomena: He is beyond all this, for this is nature only and is God's creature. He thus as truly transcends the understanding as He does the sense, and can not possibly become objectively known by any logical process but by the higher faculty of the reason. All philosophy is most absurdly denominated Rationalism, which

makes its ultimate conclusions to be in nature, and denies that there is any thing which may be known as the super-natural. It is a Rationalism discarding the very organ and faculty of reason itself.

And here it becomes highly important to note, that some of the strongest entrenchments of skepticism both in philosophy and religion—some of the most elaborate defences of all Infidelity—are now in process of erection upon this high ground. Whether named Liberalism, Neologism, Rationalism, or Transcendentalism; its foundation is here, and the superstructure is going up on this basis. And true philosophy has not accomplished her work and fulfilled the end of her mission, until she has utterly and forever demolished this entire foundation. It were a reproach to philosophy and theology to delay the final conquest of all this region, which from the days of Moses by the gift of divine authority, and from the days of Plato by the right of original discovery, has been the domain of truth, religion, and science; and which only by a lawless usurpation has seemed to have passed into the hands of aliens. Every mind which has worked its way up to these heights of human thought, well knows that in this pure region there is a broad and fair inheritance for philosophy, and which it is incumbent on her to explore, to possess, and to cultivate. If some who have been there, growing giddy from the height or dazzled by excess of the brightness, have taken wrong positions and run false lines, their errors are surely not to be redressed by ridicule nor railing from those who stand below, but effectually in nothing short of girding up the loins, and ascending to the same heights, and making so accurate a survey as shall give the right to subvert their

false positions and abolish their wrong landmarks. Error any where, when brought within the grasp of truth, is easily crushed, but never can the hand of truth be laid upon those errors in high places, except as some shall go up in her name, and take a final stand upon this last and highest point where science and skepticism may grapple in conflict.

And certainly, the only possible method of finding such a position is from the final results of a Rational Psychology, which having given the laws of intelligence in the functions of the sense and the understanding, now completes its work in the attainment of the conditional laws of the faculty of the reason; and by knowing the reason in its law, may thus lay the foundation for demonstrating the valid being of the Soul in its liberty, and of God in His absolute Personality, which can possibly be objects for the faculty of the reason alone. A true and comprehensive Rational Psychology is a necessary preliminary to all demonstrations in Ontology, and the subversion of skepticism by giving a position which commands the whole ground of its fundamental assumptions.

From all the foregoing considerations it is now manifest that Rational Psychology may subserve the purposes of science in three distinct departments, by affording a position from which skepticism in relation to the valid being of the objects given in each, may be met and counteracted. We have thus three distinct fields for our investigation, and in each of which lie some of the most important questions fundamental for all science. We need to determine the conditioning principles of *perception in sensation*; as the basis of an argument for demonstrating, that the objects

given in the sense as single qualities and exercises are real appearances. We need, moreover, to determine the conditioning principles of all *judgments in the understanding* ; as the ground for demonstrating that the real phenomena given in sense are connected in substances and causes and thus become a nature of things, and which is also a valid reality. And then, lastly, we need to determine the conditioning principles of all *comprehension of a nature of things in the faculty of the reason* ; as the ground for a demonstration that the Soul in its liberty, and that the Deity in His personality, are valid existences. The *Psychology* terminates in the science of the faculties of the sense, the understanding, and the reason ; and when this is made the basis of a further demonstration for the valid being of the objects thus given, the science becomes *Ontology*.

In this may be seen an outline of the work which is here proposed to be accomplished. - The course lies in the direction toward the highest attainments of thought to which the human mind may elevate itself. So far forth as our positions shall be taken in those *à priori* demonstrations which are given in the necessary and universal laws of intelligence, we may compel the convictions of even skepticism itself, and settle the rights and substantiate the claims of science to all her possessions. This is not the place to affirm the competency to put these topics in the clear light of an *à priori* demonstration ; but we are about to make the attempt, in all humility and with some sense of the magnitude and difficulty of the task, to explore how far we may find ground, and how firm it may be, for putting up our

intellectual buildings, and securing a completed structure of human science. Is the human mind shut up to *faith* on all subjects? or are there some paths which lead to *science*? So far as the present attempt can avail, the sequel must determine to which alternative we are left.

RATIONAL PSYCHOLOGY.

GENERAL METHOD.

CONVICTION from testimony is *Faith*; experience in consciousness is *Knowledge*; and the facts in experience carried back to a law which binds them together in systematic unity is *Science*. When this law is found by bringing many conspiring facts together, and assumed to be universal because it expounds and combines them so far as applied, it is *inductive or empirical science*. When the law is determined from a necessary principle, and thus in the principle it is beforehand seen what the law and therein also what the facts must be, it is *transcendental or rational science*. The last only is the science now contemplated, and the following process is conditional for its validity as the true science of realities.

The principle must be an ultimate truth, which in the insight of the reason is given as having in itself *necessity* and *universality*, and which consequently is not conditioned by power but must itself condition all power. It is thus no *fact*, or thing made, but an eternal truth which in the reason determines how things must be made. Thus, no three points can be made, which must not be in one plane; and

no cone can be made, which must not with its diameter on all sides through its base and surface be a right-angled triangle. With such principle as an ultimate truth in possession, it must further be competent to carry its determinations all through the process that is to be passed in the making, and thus beforehand see how the principle is a perfect scheme for the fact. As in the cone, it is competent to see that a right-angled triangle revolving about one of its sides containing the right angle is a perfect scheme for its making. The universal principle goes through and determines every part of the process, and except as you can so carry the principle through the process you can never determine that you have made an exact cone. In this perfect scheme for the fact we have beforehand a complete *Idea* of the fact. But so far, this is only a science of the *possible* and not yet a science of any *reality*. Perhaps there is no actual maker, or no existing material, that shall secure such a fact really to be. The animal could not make the exact cone if he had the material, and the rational man could not make it if he had no other than fluid materials.

Some really existing fact must be given in which we can find a *Law* running all through it, and which gives exact relationship to, and is an *informing* bond for, all the parts, and which expounds the being and working of the whole thing, and in that law we shall have a *science* of the thing. If the Law, however, be only hypothetical, viz., that which would expound the thing if we knew the Law itself were true, or which we assume to be true and universal because it serves so well to the extent that we can apply it, then is the science of that fact only *inductive* or *empirical*; viz., good or valid so far as the induction of particular

experiences has gone. But if we can take the Law and find it to be in complete accordance with the Idea which has been determined by an Eternal principle, then have we a science for the Law, as well as for the fact in the Law, and such becomes a transcendental or rational science of a reality. We know both *that* the fact is, and *how* it is. The reality has a Law determined in an Eternal principle, and thus both Law and Idea come together in exact correspondence. The only valid criterion for true science is, then, *this determined correspondence of Idea and Law.*

It will make no difference which is first found the Law or the Idea. The fact taken will ordinarily lead to the Law, and the study of the Law in the light of reason will bring out the Idea, and thus the science will be *learned*; or the Idea may be first attained in the reason, and the fact made from it, and this put as law into the fact, and thus the science will be *created*. But whether as creator or learner, in each case the Idea in the reason and the Law in the fact are both attained, and found to be in complete accordance. The Inventor of the steam-engine first had the Idea, the observer first had the Law, but both come to have Idea and Law in known correspondence.

And now it is the Intellect itself that we seek to bring within this exact science. We strive to attain a *Rational Psychology*.

By attaining the different intellectual faculties and their functions of operation in all ways of knowing, and beforehand seeing how a way to a rational demonstration may be made to lie over this groundwork of a necessary idea conformed to an objective law, we shall at once determine what our General Method must be.

Mind is an agent, spontaneous in its activity, and puts forth its agency in three distinct capacities—the sentient, the intellectual, and the voluntary. The products of these specific capacities of action may be termed respectively, sensations, cognitions, and volitions: the capacities themselves are the Sensibility, the Intellect, and the Will. The mind as one agent is competent for action in these three capacities. Rational Psychology is conversant with all these capacities, but is more particularly concerned with the functions of the Intellect, and with the others as conditional for this, rather than giving to them a direct attention.

The Intellect is inclusive of the entire capacity for knowing, and is the source for all cognitions attainable through whatever faculty. The cognitions differ, not numerically merely, but also in kind, as they are the products of the Intellect through different faculties. These different faculties are, THE SENSE, THE UNDERSTANDING, and THE REASON. What these are respectively as distinguished from each other, and what their relations and dependencies, will better appear in the progress of our investigation. It is of importance here only to note, that their distinction is fundamental, and any confounding of one with the others must necessarily induce, not obscurity merely, but errors, contradictions, and absurdities. These three faculties include all the powers of human intelligence, and fill our entire capacity for intellectual action; nor may we attain the conceptions of any other form of intellectual agency for any being. So far as human conception can reach, we have exhausted the entire subject of psychological investigation in reference to all possible forms of knowledge, when we have attained the functions, and their law of operation

respectively, of the Sense, the Understanding, and the Reason.

Inasmuch as our design is not the mere attainment of the cognitions given in any or all of these faculties, and which would stand only as simple appearance in consciousness; but much further than this, viz., the law for the process itself, and thereby an interpretation of the intellectual agency, and not merely a consciousness of the products of this agency; it becomes necessary that we attain the subjective idea of each distinct faculty, and also the objective law of each, and the determination that they stand to each other as correlatives. The appearance in consciousness may be termed knowledge; but it is only the philosophical interpretation of the process by which this knowledge as appearance in consciousness is attained, that can properly be termed *science*. And, moreover, since it is not from experience that we seek to attain our subjective idea—which could only attain to the affirmation that so our form of cognition is; or, that so in future it must be, on the hypothetical assumption that all experience must be uniform; and in this way merely an inductive science, which is incompetent to exclude skepticism from its very foundation—but we seek this subjective idea as transcendental, and conditional for any experience in knowing, and such as that according to it only is the process of intellectual agency at all possible, and thereby attaining to a rational science which may expel all skepticism from both foundation and superstructure; it becomes necessary that we attain to a position which transcends all experience, and in that pure region intelligently and demonstrably possess ourselves of the conditioning idea, determinative of how a knowledge in the

sense, and in the understanding, and in the reason, respectively, is possible to be, and, therefore, if such knowledge ever actually is, how it must be.

But, further, inasmuch as such subjective idea is but a mere void thought, and only determinative of how it is possible a knowledge may be in either one of the faculties of the sense, the understanding, and the reason, it becomes necessary that we go further, in the case of each, and attain, in the actual facts of such different kinds of cognitions, a manifest law running through the facts and binding them up in systematic order; and then also determine that this law in the facts, is the exact correlative of that determined idea, which it had already been found must regulate all possible experience in knowing.

Our work thus necessarily divides itself into *three parts*—the Faculty of the Sense; of the Understanding; and of the Reason. We must attain the subjective Idea for each, and also the objective Law of each; and in each case determine the correlation of the idea and the law respectively. In this we shall have reduced each faculty of knowledge to a rational science, and in this Rational Psychology will be completed. Moreover, in these conclusions of Rational Psychology, we shall find the data for demonstrating the valid being of the objects given through these intellectual faculties; and thus in each department we may add also the outlines of an *Ontological Demonstration*.

PART I.

THE SENSE.



DEFINITIONS AND SPECIFIC METHOD.

IN *the Sense* I include our whole faculty for bringing any object within the distinct light of consciousness, and making it there immediately to appear; and such cognitions, as appearance in consciousness, constitute knowledge in the sense. The intellectual agency, which takes up these appearances in consciousness as distinct objects of knowledge, I term *apprehension*. When the apprehension is that of appearance having position and figure in space, it is of the *external sense*; when the apprehension is that of appearance determinative of the inner state and agency of the mind itself, and thus that the states and acts of the mind become its own objects in consciousness, it is of the *internal sense*. The completed process in the functions of the sense is *perception*, viz., the *taking* of the appearance as object given in consciousness *through* some medium. The appearance, as object perceived, is called *phenomenon*. The states and acts of the mind apprehended in the internal sense, as truly as the objects apprehended in the external sense, and which have position or shape in space, are phe-

nomena ; since they all *appear* in consciousness and are thus perceived. We as truly perceive a thought or an emotion, as we do a color or a sound. The phenomenon has its *matter* and its *form*. The *matter* is the content which is given from somewhere in the sensibility ; and the *form* is that modification of the matter which permits that it may be classified, or ordered in particular relationships with other phenomena.

The capacity for receiving the content, as matter for a phenomenon, is *sensibility*. The affection induced by the reception of the content in the sensibility is *sensation*. In this we include the affection particularly which *precedes* perception, and is conditional for it. The eye or the ear, as organ of sensibility, may be affected in a content from somewhere given, as by the rays of light or the undulations of the air, and this impression or affection is it precisely, which we mean by sensation, and which is the condition for the intellectual apprehension and perception. There is, also, an affection of the inner state which may *succeed* the perception, and for which the perception is conditional. The perceived landscape, or music, etc., may affect the inner state agreeably or otherwise, and such affection, if called a sensation, should be distinguished from the result of an organic affection. We might call the organic sensibility the *Sensorium*, and the sensibility of the inner state the *Sensory* ; and the products or affections in the first, *sensations* ; and those in the last, *emotions* ; and the distinction would be sufficiently marked. But in the case of knowledge through sense, we have occasion only for a reference to that which *precedes* perception, and shall not need here, therefore, to recognize any such distinction.

The faculty for giving form to the matter in the sensation is the *Imagination*. It is the faculty which conjoins and defines—the constructing faculty—and is a peculiar intellectual process, which may hereafter in our work be better disclosed. It is sufficient here to say, that while this is essentially the same operation that gives form to the material already in sensation, and that which constructs form in pure space; *i. e.*, it is the same agency which gives roundness to the ring or the wheel in sensation, as that which constructs the roundness of a mathematical circle in pure space; yet is the term *Imagination* more appropriately applied to the latter than the former. The last is purely the work of the intellect, and thus wholly from imagination; the first has been conditioned in its intellectual agency by the content in sensation. They may be distinguished as an act of *attention*, and an act of *imagination*.

An object which is void of all content in sensation, and has only its limits constructed in space or time, is termed *pure*; while such object as has a content in the sense is termed *empirical*. Thus, any mathematical diagram is *pure* object; and any color, or weight, or sound, etc., is *empirical* object. *Intuition* is an immediate beholding; and is *pure intuition* when the beholding is in reference to a pure object, and *empirical intuition* when the beholding is in reference to an empirical object. Thus, the immediate beholding of three times three mathematical points in space

$$\begin{array}{c} \vdots \\ \vdots \\ \vdots \end{array}$$
to be nine, is a pure intuition; but the immediate beholding of three times three material balls, or counters, to be nine balls or counters, is an empirical intuition. Inasmuch as the whole field in which the objects are given in the sense is to be examined, we shall have occasion to make

a *Division* in this part of our work, and attain the subjective idea of the process in the sense in the construction and apprehension of *pure* objects, and also of *empirical* objects.

And here we are ready to give the *Specific Method* of our process of Rational Psychology for the faculty of the Sense. We isolate this from all the other functions for knowing, and must in our *first Chapter*, from an *a priori* position, attain the *subjective Idea* of how perception in sense is possible; and, as this must include both the form in the apprehension and the content in the sensation, so there must be the *two Divisions*, the Idea in the pure Intuition, and the Idea in the empirical Intuition. In a *second Chapter*, we must attain an *objective Law* in the facts of perception, and determine the correlation of this Idea and Law. We may then give the outline of an *Ontological Demonstration*.

CHAPTER I.

THE SENSE IN ITS SUBJECTIVE IDEA.

FIRST DIVISION.

THE IDEA IN THE PURE INTUITION.

SECTION I.

THE ATTAINMENT OF AN *A PRIORI* POSITION.

ALL human knowledge begins in experience. Except phenomena are given in the sense, and the intellect quickened into activity in perception, it can exert neither the faculty of the understanding nor the reason, but the human mind remains a void and no cognition is possible. We must begin our intellectual action in sensation. But experience can include the real and the limited only, while there are cognitions of the strictly necessary and universal; and thus is it manifest that our intellectual agency, which begins in the perceptions of the sense, is not confined to experience merely. All Mathematical Axioms, at least, are *à priori* cognitions, independent of power, not deducible from any data in experience, but including all possible experience, and in their own light seen to be necessary and universal. That a straight line is the shortest which can join any two points;

that no two straight lines can enclose a space; that any two sides of a triangle must together be greater than a third side, etc., are cognitions not possible to be given in experience, for no experience comprehends them while they include all possible experience. They are no product of power, for they condition all power in their own necessity of being; they are no deduction from facts, for they are inclusive of universal facts. We shall in our progress find wide regions of necessary truth, as independent of the experience given in sensation as mathematical axioms, and which the human mind may possess as cognitions; and thus the fact is plain, that while the intellect begins its agency in the functions of the sense, it yet subsequently attains cognitions which are altogether beyond every possible empirical apprehension.

And, here, our first care is to lay open a plain passage from the phenomenal to the transcendental, and attain a position upon such *a priori* cognitions as shall subserve our main design in a Rational Psychology, and by such a process as shall admit of clear and satisfactory examination at every step; and thus, having taken our position out from experience, we may proceed to the philosophical investigation of how experience must be.

The Intellect may not take a leap in the dark out of the world of sense in which its agency begins into the pure region of rational cognitions, but must be competent to expound to itself and to others how it has reached its starting point in a transcendental philosophy. A surreptitious passage is, also, equally as inadmissible as a blind and presumptuous leap to the necessary and the universal. Dogmatism may arbitrarily assume, or sophistry may wrap itself

in specious fallacies stealthily to take, the ground on which is to be built a rational philosophy, but in no such way shall we establish a title for science, or dispossess the skeptic of the territory he has usurped. We must be able first to trace our pathway out from, and be competent to return again to, the familiar region of the phenomenal, and to determine its bearings and distances from the purely intellectual. We shall thus readily determine, that though subsequently attained by us, yet is the necessary and the universal the truly primitive region. In the process of our intellectual acquirement the empirical is first, but in the order of conditioned relations the empirical is last. In this point of view the distinction made between a *logical* and a *chronological* order is significant. As logical condition the necessary and the universal are before the conditioned and the partial; the possible before the actual, the intellectual before the phenomenal. Just as in the work of nature the germ precedes the plant; the embryo is before the adult; the cause antecedent to the effect. Yet as in nature, empirically apprehended, we are forced to reverse the process, so is it also in Empirical Psychology. In learning nature in experience we do not first find ourselves at the original sources of her secret operations, but quite upon the outside of all her products. We can not look on and watch the progress of her mysterious developments, as the work goes onward from the central salient point to its consummation; but we must retrace, as we may, what has been done by following back the print of her footsteps. Thus, in the intellectual operations, we first find the phenomenal as already given, and then go back to the intellectual; we have first the fact, and then we search out the principle;

first the knowledge, then the scientific conditions by which it was possible we should know. Thus the first is last, and the last is first. With the phenomenal in possession it is incumbent, first, to find our way out to the purely intellectual, and having attained the transcendental position, there note that though chronologically last found, yet that logically it was first, and necessarily conditional for the phenomenal from whence we started.

Commencing with the phenomenal, the process will be to make an abstraction of all that has come into consciousness through sensation, and thereby find that which was prior to, and conditional for, the perception. When the matter shall be taken away, the real form will remain; and when that which gave reality to the form is taken away, the possible or pure form only is left, and this pure form separated into its pure diversity is the *primitive intuition*.

I. *The primitive intuition for all phenomena of an external sense.*—Whatever object we may apprehend in an experience—a house, tree, mountain, etc.,—it is for the sense; and as phenomenal, an assemblage of single qualities only. We now take any such object—a house—and proceed to make abstraction of the several phenomena which any organs of sense have given in the perception. Color has appeared, and we now exclude it; smoothness or roughness, hard or soft, weight or resistance, as they have been given, we now take away; and so also of sounds, odors, tastes, or any qualities of any possible function of the sense, we now remove; and thus make a complete abstraction of all content which the entire sensibility may have received. We shall have still remaining the *void place* which had been occupied by the qualities now abstracted. This remains for

the intellect alone, and is as nothing in the experience; but for the intellect it remains immovable and indestructible. It remains in defiance of all further attempts to a more complete abstraction in that place. It is the real *form* of that object from which the *content* has now been utterly taken away.

But, although we have taken away all content of sense, and can not go further and take away the place, still have we not taken away all product of the intellect. There is a defined and limited place, a constructed form which has real outline and shape, and we may intellectually proceed further in this direction with our abstraction, and take away that which limits and defines this void place, and thus annihilate that in which its unity and wholeness exists. We have then a void which is limitless, undefined, unconjoined into any total, and which is simply a pure intuition of what is possible for form and content.

In this abstraction of all content and all form, and thus the removal of all that can come into any outer experience, we have taken away that which can be common to us with others, and have left only a limitless void, which, as similar in each, lies distinct in each one's consciousness who has made the complete abstraction. There are as many limitless voids as there are subjective consciousnesses in which the content and form has been taken away. They can not now, in the absence of all outer object, commune with each other, but each one is shut in within his own limitless void in his own consciousness. Still, each one can proceed with a further abstraction. The void in each is limitless, but it is still in unity. Every part is a concrete with every other part. The abstraction may proceed to take away that

which holds all parts in connection to all others, and we shall have left a limitless void, wholly unconstructed in unity, and standing in the subjective consciousness as so many contiguous void points, which do not coalesce together. The limitless void is a manifold of void limits, which stand only as pure limits, without any limited. And here it is impossible that we should carry the abstraction further in any direction. As the condition that a sense should be in which the phenomenal may be given in any extension as real form, there must be, as its back-ground in the consciousness, this manifoldness of void points. Take this away, and no place can be made in which the phenomenal can appear in real form. Attempt to take this away, and you are stopped in the very absurdity of the process; the void limit must still be, even in the very point from whence it is assumed to have been abstracted. This is pure space as given in a *primitive intuition*. When I have in consciousness a mathematical line, circle, or other diagram, I have such mathematical figure in *pure* intuition, but such construction of the figure was possible on the condition only that there was first the void points in the *primitive* intuition.

Pure space in the primitive intuition is thus a rational cognition necessary and universal. Though now attained in abstraction from experience, and in chronological order subsequent to experience, yet is it *a priori* conditional for experience and without which no appearance of outer object could be. It is a transcendental cognition, and yet in its necessity is more valid than any phenomenon in the sense can be.

II. *The primitive intuition for all the phenomena of an*

internal sense.—In the light of consciousness we discriminate between one mental exercise and another, and thereby distinguish all the different products of our mental functions, such as thoughts, emotions, purposes, etc. These are quite different phenomena in kind from all such as appear externally in space, and must therefore have their pure form originated in some different primitive intuition.

We may take any phenomena as they come and depart in our inner consciousness and thus produce changes in the internal state. It may be a train of thought as passing in consciousness. As one thought comes and departs for the introduction of another, the apprehension of them must be in succession, and the consciousness possesses them as sequences in a series. If then we abstract the phenomenal thoughts in the train and thus take away all the content in these successions, there will remain the instants in which each stood in the series, and which will in connection give a *void period* that had been occupied by the passing thoughts now abstracted. This abides for the intellect only, and resists all efforts that it should be taken away. It is a real *form* for the content taken away, and is itself quite indestructible.

And so to the same end, we may take any passing phenomena of the external senses. As apprehended by the Intellect, they affect the internal state as does a passing thought, and as the perception of one phenomenon passes and another arises in consciousness, the inner sense is determined as successive in its affections, and this content must fill a period in the inner sense as truly as a place in the external sense. If then we make an entire abstraction of the phenomena perceived, and thus also of the perceptions as affecting the internal state, we shall have the successions in

the instants in which they occurred, and which, as limited by their beginning and terminating, is a void period as the real *form* in the internal sense, and which in the abstraction of the content is itself left indestructible. While, however, we have taken away all phenomenal content and can not go further and take away the duration in the period, still may we carry the intellectual abstraction to a further degree. We may take away the limits which begin and terminate the period, and thus annihilate that which gives to it individuality and definiteness, and there will then be duration limitless and indefinite, and standing out as the bare possibility of what may be limited into formal periods and filled by phenomenal successions.

In this removal of all content and form from the duration, we have taken away that which can give a common duration to ourselves with others, and can now only each one have his own duration in his own consciousness. The successions go on in his own internal sense, and no one can commune with the successions going on in another's consciousness. Still may each one carry the abstraction to a more full degree. The duration in each is limitless but still a duration in a connected sequence. The sequences are all concrete and the series a perpetual continuity. We may then take away that which connects the sequences in continued series, and we shall have not only an emptiness of all phenomena and limitation, but an exclusion of all coalescing of the instants, and only these instants in their diversity and manifoldness will remain, as the bare possibility of what may be combined into continuous duration and constructed into successive periods. No further abstraction is possible, for all attempt to take away the instant and have that which

is empty of all instants in which some instant might again stand is an absurdity. Here then is pure time as given in a *primitive* intuition, and which is conditional for all arithmetical number as given in a *pure* intuition.

Pure time in the primitive intuition is thus a necessary and universal rational cognition, attained chronologically by experience and yet conditional for experience, and more certain than any appearance in experience can be.

Inasmuch as all phenomena must be given in an external or an internal sense; and pure space is the primitive intuition for all possible phenomena of an external sense which must have place, and pure time is the primitive intuition for all possible phenomena of an internal sense which must have period; we have in pure space and time the primitive intuition for all possible phenomena. And as we have taken pure space as one transcendental position, we may now also take pure time as another, satisfied that they are both given in an *à priori* cognition, and that they give to us the possibility for all the real forms in which the intellect can order any appearance in the sense.

Now, it is altogether true, that the faculty of the sense can not overlook and in an *à priori* manner examine itself, and go back and take up positions out of itself; and if we had no other faculty than that of perception in sensation, and the capability of abstracting comparing and combining what had been given in sensation, most certainly we could attain no transcendental positions. It would be like asking the eye to see itself, or the touch to feel itself; thus demanding that experience should bring itself within its own circumscription and by subjecting itself to its own action literally experience itself. But certainly we encounter no such

absurdity when we assume a faculty higher than that of the sense, and which is competent to make the very conditions of sense its objects of cognition; and that the possession of such higher faculty is not mere assumption, beside the demonstration which will be given in its proper place, we have already sufficient evidence in the above results. If all cognition must be of that only which is first given in the sensation, then certainly the primitive intuition of pure space and time must be an impossibility. When we have taken away the content of sense we should have no possible cognition left. Space and time would be not only void, but it would be a void of space and of time; and the intuition that pure space and time were prior to the content put within them, and conditional for the possibility that such content should appear, would be preposterous. It would be making the sense cognize that which is prior to, and conditional for, its own action. Pure space and time are never an appearance in sense, nor at all a part of what is given in sense, and the fact that we cognize them at all is the evidence of a higher faculty than sense, and especially that we cognize them to be necessarily and universally conditional for all perception in sense.

We are making no assumptions merely, and standing upon no mere chimeras, when we take up our position, in the primitive intuition, upon the *a priori* cognitions of pure space and time. That they are the primitive forms for all possible phenomena, that they are *a priori* to, and conditional for, all phenomena, is seen in their necessity and universality.

SECTION II.

THE PROCESS OF AN A PRIORI CONSTRUCTION OF REAL FORM
IN PURE SPACE AND TIME.

SPACE and time are given in the intuition. They are immediately beheld, and this irrespective of any content in the sensibility, and are thus *pure* Intuition; and as prior to any real forms, and only conditional for all possible forms of figure and period, they are *primitive* Intuition. As purely in the primitive intuition, they are wholly limitless, and void of any conjunction in unity, having themselves no figure nor period, and having within themselves no figure nor period, but only a pure diversity in which any possible conjunction of definite figures and periods may, in some way, be effected. We now begin our work from this transcendental position, and our first business is to determine the process by which a conjunction may be effected, and real forms be constructed in pure space and time..

Although we have come from the phenomenal in sense out to this pure condition for all that may be phenomena, by abstracting all that has been given in the sensibility and the intellectual agency, yet can abstraction be of no further avail. We now seek, not the process of attaining a real form by beginning with some phenomenon, and taking away its content in the sensibility thereby leaving its void form in the intellect, which would be but an empirical process; but we begin at the other extreme of the process, and seek to construct our real forms from the formless and limitless space and time as given in the primitive intuition, and in this *a priori* process determine how a construction of real

forms in space and time is possible ; and thereby for whatever is, a determination *a priori* how it must have been, and for all that is to be, how only it is possible that it should be.

And here, with space and time as given in the primitive intuition, where all is mere diversity without any conjunction in unity, and therefore wholly limitless and indefinite—where all possible position, shape and period may be, but where no fixed position, defined figure, and limited period yet is—it is manifest that nothing can appear as real form in any intellectual apprehension, except as in some way this real form be constructed as product within this primitive intuition. As utterly void of all construction and product, pure space and time must ever so remain, except as invaded by some constructing agency, which shall conjoin what is diverse, and limit what is indefinite, and thereby produce real bounded and united forms within the void intuition. Pure space and time are not agents that may collect themselves into definite and discriminate portions of each, and affix precise limits within themselves, by which their parts may possess outline and each become one whole figure in space or period in time. Some agency *ab extra* must make such conjunctions, and give such limits. But the primitive intuition is no agent for constructing, producing, and limiting ; this is a mere immediate beholding of what is, and no producer of it. Thus, as no constructed real form is in pure space and time, the primitive intuition can never of itself attain such real form. The intellectual agency as imagination, or form constructor, which Coleridge calls the *eisem-plastic power*, from εἰς ἐνπλάττειν to shape into one, must introduce itself within the void, and produce its real forms

for its own subjective apprehension. The primitive intuitions of space and time can never take real form within themselves, and which may be apprehended as definite figure and period, except through such intellectual construction.

We will, therefore, look minutely to this entire process of an intellectual construction of real forms in pure space and time, inasmuch as in this will be found the subjective idea of the sense in the pure intuition. In this section we will give this agency in its *results* only, and reserve for consideration in future sections the more profound and difficult work of attaining the *à priori principles* of the process.

I. *The construction of real forms in pure space.*—Let there be an intellectual agency given, which may come within the field of the primitive intuition in pure space, and exert its constructive faculty therein, and let us notice what must be its results. In the spontaneity of its own functions it moves through the void in pure space, constantly within the intuition, and is thus perpetually and directly beheld in all its progress. In the as yet uncollected diversity in pure space, this agency is in the field of the primitive intuition, and at that point in the diversity of pure space a position is taken. The void is no longer empty. A point is made to stand distinctly in the intuition, and is a limit as beginning or starting-point in the process. As this agency moves onward there are perpetually new positions attained, and new points made to stand out prominently and precisely in the intuition. So far as this agency goes in its spontaneity, it has brought the diverse points through which it passed into a conjunction, and made its own pathway precise and plain by collecting into itself the points as continuous con-

tiguity. Here, then, is a definite, real form as product of the intellectual agency. There is the limit or starting-point, as beginning; the perpetuated product in the continuous points all conjoined in the progressive movement; and there is the limit, as terminating point of this agency; and here first arises in the intuition a completed product, and a definite real form—the mathematical *line*—appears. Pure space is no longer void diversity as given in the *primitive* intuition, but a conjunction of some of the diversity has been effected, and a line as one whole in its unity is cognized. This is wholly a product of the productive imagination and has subjective reality only, hence as void of all empirical content it is *pure* object, and is cognized in *pure intuition*; but, as being *real* form produced in pure space, there is more than the mere diversity in the *primitive intuition*.

And now, nothing hinders, that such an intellectual agency may be possible in its going forth to the construction of all possible forms in pure space. Right lines, and lines which shall be joined in their terminations in all possible relative directions, and thus holding between them all possible angles, and which may enclose all possible rectilinear figures, may be constructed. Curved lines, and of all possible circularity and modification of curvature, and meeting in the construction of all possible curvilinear angles and figures, and the blending of right and curved lines in all possible modifications of mutual relationship in angle and shape, may be produced from all possible positions in pure space. All the real forms possible in pure space are thus of practicable production in a pure intuition. In the particular is given the universal, and it is an *a priori* cognition,

that as one pure object may be thus constructed, so it is competent that all the real forms which pure space may receive can in the same way be constructed. And as such construction may be, so also it is an *à priori* cognition that, if at all, thus they *must* be constructed. The primitive intuition can give the diversity in its unconjoined manifoldness only; and if any conjunction, in the unity of a definite real form as pure object, be effected, it must be through the constructing agency of some eisemplastie or form-producing faculty. The pure object must be given to the pure intuition, by some intellectual agency constructing it within the field of its immediate beholding. We have in this way the process of an intellectual agency, or productive imagination, which results in an *à priori* possibility for all real forms in pure space.

II. *The construction of real forms in pure time*—Time as pure in the primitive intuition, is like pure space utterly unconjoined and indefinite. It is conditional for all possible periods, but as yet it is wholly a diversity of instants, and no definite and limited period has been given within it. The intuition can not construct, but only immediately behold what may be constructed. The same intellectual agent as productive imagination before noticed, but in a somewhat modified view of the agency, must construct the real form as pure period within the primitive intuition. As time is the primitive intuition for the internal sense, and all determination of succession in time rests upon the determination of changes in the inner state, so all construction of period must demand that the inner state be, in some way, continuously modified in its affection. And that this modified affection, as change of the inner state may be determined, it

must be made to stand in a relationship in the intuition to some permanent. Mere movement can not determine succession, but only movement in reference to somewhat that is permanent; and as the period to be constructed is pure, so the permanent must be in the pure intuition also. And now, all the above requisites may be attained in the following way, and are wholly impracticable in any other manner.

Let the intellectual agency be conceived as moving along a pure line in space. This line is itself a permanent in the intuition, and every point in the line is a permanent, and as the intellectual agency passes along the line within the immediate field of the intuition, the movement as change of place gives continuous modification to the inner state, and this succession of affection in the internal sense is the determination that a time is passing. The *movement* is that which is here alone regarded, and not the *line* as product of the movement. This intellectual agency is commenced at a given point in the line, and at that given point the affection in the inner state begins, and as the movement passes onward the inner state is continuously modified, until at length the movement terminates in another point in the line and the modification in the inner state ceases. At each contiguous point in the line there has been a coincident modification of the inner state, as the intellectual movement passed along from instant to instant in the intuition, and in each modification of the inner state a moment of time has passed, and thus successively from the commencement to the termination of the moving agency, and thereby a definite period has been constructed, in which the instants have been conjoined in unity by the movement and limited on each side as a complete whole.

This is more than mere diversity in the primitive intuition of time, since a real conjunction of the diverse instants has been effected and a completed limit set to it, and thus a real form produced; but inasmuch as there is no content of the sensibility it is *pure object* only, and existing merely in the subjective intuition. And here, it is plain, that nothing hinders the construction of all possible periods that may be in time, of all possible varieties of duration. The primitive intuition gives the diversity of time in its indefiniteness, and the productive imagination may move on in any extension of a line of instants and give its modifications to the inner state, and thereby its definite succession of moments, and in this way its pure periods as real forms in time to any possible degree that such pure periods can be in time. And as all possible periods *may* be so constructed, so also it is an *a priori* cognition that if any is constructed at all it *must* be in this manner. The primitive intuition can not construct, but an agency must move within it, and conjoin what is diverse in its manifoldness into one completed product, and which may thus be intuitively seen in its definiteness, and its distinctness from all other constructed periods.

With pure space and time in the primitive intuition open to an intellectual constructing agency, all possible figures in space and periods in time may become pure objects in the subjective intuition. And this is the only possible method of attaining real forms from the primitive intuition. I can have no line in pure space, except as by my constructive agency I *draw* the line; and no other figure in pure space, except as through the same agency I *describe* that figure; nor can I have any period in pure time, except as through an intellectual agency I successively affect my inner

state, and in the conjunction of the instants *construct* the period. In this manner may all possible real forms in pure space and time be given in a pure intuition, but in no other manner can any real form be effected. We have thus a conditioning principle, rationally determined, that all possible pure objects in space and time *must be constructed by an intellectual agency*.

Let it here be noted that pure space and time in the primitive intuition offer nothing to invite, to guide or to hinder an intellectual constructing agency. In the spontaneity of the productive imagination, all possible real forms *may* be thus given. This *result* being attained it is demanded that its process be subjected to a much deeper analysis, and in which many points of difficult explanation must be carefully examined. To this we proceed in the next section.

SECTION III.

THE PRIMITIVE ELEMENTS OF ALL POSSIBLE FORMS IN PURE SPACE AND TIME.

THE diversity of points in space and of instants in time as given in the primitive intuition is wholly subjective, and lying for each one in his inner consciousness. The intellectual agency moves for each within the same inner consciousness subjectively, and thus both the primitive intuition of space and time and the constructing intellectual agency are conditional for the completion of all real forms, and without both of which no faculty of sense, or function for apprehending phenomena, could be. The subjective pure form

and the objective empirical content must alike stand constructed in consciousness, and the elements in one will be the elements in both.

In attaining these primitive elements for constructing forms we shall be able to determine for them that they *must be*, and that *so many* must be, and thus both their necessity and completeness. There must be *the Primitive Intellectual Operation*, and this must have its specific *Primitive Elements*, and which we here proceed to attain.

We have already examined the *general* process for the possibility of real form in pure space and time, and found that as the primitive intuition does not construct, an intellectual agency must construct the pure object. This is done by conjoining that which was before diverse and unlimited in the primitive intuition, and bringing it by this agency into a completed and defined pure object. Thus all figures in space and all periods in time may be constructed. This, then, is the intellectual operation to be here *specially* considered, that we may attain the *à priori* elements which enter into the process. It is properly a *constructing* agency, and as this is effected by conjoining what before was unconjoined or diverse, it is the work of CONJUNCTION that we are to examine, and see what are the elements conditional for it. What are the primitive elements in *the operation of conjunction*?

1. In the primitive intuition of pure space and time nothing is conjoined, and thus no product can be cognized because nothing is produced. Such possible product is the result of a constructive agency, and this must be effected by *conjunction*. And now, what must be *the first element in the à priori operation of conjunction*? This may be

determined by an immediate beholding in pure space and time.

The intellectual agency in conjunction must not merely *move* within the primitive intuition. If there were only a mere passing in pure space and time no result could remain, for no line as its pathway would be left by the movement. It would be a mere passing through the void intuition, leaving it still to be void, when the movement had wholly transpired. It must, then, be an agency which can take up and collect within itself this diversity in the primitive intuition as it passes along through it. One point in pure space assumed as a position, and made the starting-point or commencing limit of the movement, must not be left as it was before it had been so assumed, but must be conjoined to the point next assumed as position, and this also to another, and thus onward to the point which becomes the terminating limit of the intellectual movement. If I take up any number of diverse objects one by one, and throw away the first when I take the next, no possible accumulation can result, because no product can be thus generated. Merely to repeat one, one, one, would not be to count; but that any number should be generated in the process, the first one must be retained and conjoined with the succeeding one, and thus conjoined they are no longer diverse as one, one, but the first is produced into the second making them together to be two, and this product of two is then produced into the next one, making all together to be three, and thus onward through all the progressing agency until it terminates. So in the diversity given in pure space and time, the agency must collect and conjoin within itself in its own movement the diverse points in

space or instants in time, and in this conjunction only can there be product as a line or a succession. The agency *collects within itself* what it takes up in passing, and thus only is it *intelligent* agency.

And now, as this *may* be to any degree possible in pure space and time, and for any possible amount and modification of figure and period, so also thus it *must* be for any and every figure or period that shall become product therein. Such a conjunction of what is diverse in the primitive intuition is a universal necessity for all possible product in space and time, and is hence an *à priori* cognition. All possible experience must be regulated by it, and conform to it. But this conjoining process is a strictly *uniting* process—it *unifies* the diverse as given in the primitive intuition, and thus pure space and time remain no longer a diversity but a unity where this intellectual agency has passed, and only where it has passed. In the passing it has collected into itself and thereby *united* what it has taken up, and all this is done in the immediate intuition and is thus directly beheld. It needs no demonstration, it is already intuition. The first element, therefore, in all processes of conjunction and thus in all products as real forms in space and time, as found by an *à priori* cognition, is *Unity*.

2. As this conjoining process goes on, that which it has taken up and gathered within itself, being no longer diverse but conjoined, becomes a collection or synthesis, *i. e.*, a *diversity in unity*—and which is the precise conception of a *multiplicity*. A number of diverse points in space, merely as they stand in their diversity, may be said to be *many* (multi), inasmuch as it is possible they may be conjoined; but it is by their conjunction, or *implication* one in an-

other, as the product of an intellectual agency, that we come to the cognition that it is other than *many*, it is the many *united* (multi impliciti). As the least that is possible in the conception of unity is that of one conjoined to one (unus et plus), which is plurality; and this admits of any possible increase (unus et plus, duo et plus, tres et plus, etc.), and is still plurality; this expresses the conception more completely than multiplicity. It is so many and *more*; and thus though a unity yet an incomplete process with still the agency going on in its work of conjunction. Such, it is *a priori* seen, must be true in all construction of real forms in pure space and time. The agency must commence with a position as a starting-point, and move to another position conjoining it to the first, and in this is *unity*; and as it is one and more (unus et plus), and as yet indeterminate how much more, inasmuch as the uniting process is not yet completed, it must be a *plurality*. All conjunction must stand thus in the pure intuition, as a begun but incomplete product so long as the agency is in progress, and thus having within itself the element of *Plurality*.

3. The unity in a plurality, though a condition for all real form in pure space and time, yet is not all that is conditional. The diversity in the primitive intuition is not thereby a unit, though in unity. The terminating limit is not yet given, and thus it can not be said yet what the completed real form shall be. It is in the process of construction, but all possible form yet beyond what has been constructed still remains in the primitive intuition, and thus open to the constructing intellectual agency, and thereby forbidding that we should say more than that there is the unity in a plurality. There must come the termination of the agency, and

the intellect must cease to collect any more of the diversity into itself, and thereby affix a terminating limit to the conjunction, and thus define what has been united on all sides, and then first arises a completed pure object as entire product in space and time. This unity in the plurality completed, becomes then a whole, cutting itself off from all that is not included within its own circumscription, and standing out in the pure intuition as a real form, definite in its own constructed totality. All real form must possess a *total* of the plurality in unity, and thus a third primitive element is *Totality*.

It is now manifest that while no real form in space and time can possess less than the elements of *unity*, *plurality*, and *totality*; so likewise can no pure object possess more than these three primitive elements. The whole process of construction, for either figure in space or period in time, as the intellectual agency enters upon it and goes on to its completion, can demand nothing less nor more, than that it take up the diverse, and give unity in a plurality which shall ultimately possess totality. Here, therefore, are all the possible elements of all possible conjunction in pure space and time.

Now of all possible real form thus constructed in pure space and time, whether it be that of figure or period, we may say that it possesses a *Quantity*. Quantity is thus the general term which is to express all possible real form in pure space and time; and of all possible quantity there may be *a priori* predicated of it, that it must possess unity, plurality, and totality. It can not possibly be made intelligible, except all the three primitive predicates, as above, belong to it. In the process above pursued, we may see not only that our faculty of judgment *has* so many forms, giving so many

primitive conceptions: but *why* it has, viz., that a rational cognition in pure space and time, through a direct intuition, determines that all possible intellectual construction of quantity *must* have so many and no more elements. It is not possible that any intellect should give quantity in pure space and time in any other process or through any other elementary conditions. All possible experience of shapes in space and successions in time must conform thereto, and so far from attaining them by an analysis of any of our intellectual functions, we determine them to be universally necessary for all intellectual construction of objects in consciousness.

We have in the above, attained all that is necessary in the determination of the *process* of conjunction and of the *result* in a definite and completed form as quantity. But a work equally as necessary and quite as abstruse yet remains to be accomplished, viz.: What is conditional for the intellectual *agency* that it may be competent to such a conjoining operation? Except as this inquiry shall receive a satisfactory answer, we have brought the subject of Rational Psychology through but half its difficult way to the attainment of the sense in its subjective idea, as necessary to be acquired under the first division of the intuition. This, then, will form the subject of another section, the determination *a priori* of what is necessary *in the intellect*, in order that it may operate such results in the product of a completed pure quantity.

SECTION IV.

THE UNITY OF SELF-CONSCIOUSNESS.

THE Unity found as a first element in the operation of conjunction, and which is conditional for the production of all quantity, is itself also a product. The collecting into itself the diverse points and instants in pure space and time, as its agency passes over the primitive intuition, is the peculiar work of the intellect, and such collection into itself becomes a conjunction in unity, whereby a quantity is first generated in the intuition. Such unity can be no product of the primitive intuition, but only of a constructing agency which performs its work within it, thereby giving real form within pure space and time. But what is conditional in this intellectual *agency itself*, that it may be competent to such a work of conjoining a diversity in unity?

It is manifest that if such agency were in itself diverse, and its movement a repetition of single and disjoined acts, that it could make no collection, and effect no conjunction, and thus could produce no unity in the primitive intuition. An agency which was as manifold as the diverse points and instants in pure space and time, and thus only an act in its own point or instant, would possess no capacity for passing over from one point or instant to another, and collecting them continuously into a quantity. The agency must, therefore, itself possess a higher unity than that which it produces in pure space and time; and it is only this possession of the higher unity that can make the unity in the conjunction as product to be possible. And now, the demand is,

that we attain as an *a priori* cognition, what is conditional for this *higher unity* of the intellectual agency.

1. *It must be competent to more than the simple act.*—In order to any conjunction in unity there must be perpetuated movement; but the simple act can effect no movement. If it were a constant repetition of itself, it would still result in no movement. It would be merely an act in one point, and a repetition of the act in another point, and thus only an alternating agency and not a moving agency. It would be simply origination and extinction in the same point, and this repeated in any diversity of points could not conjoin them. The oscillations of any number of pendulums in diverse spaces occurring in alternation, can not conjoin those spaces, inasmuch as the agency arises and finishes in its own space, and does not pass on to collect into itself that which is diverse from its own. As simple act, however perpetually repeated and in whatever diversity, can not be a movement through the diversity, it can not, therefore, produce any conjunction in unity. In order to this it must be a perpetuated agency, and though successive in the diverse points and instants yet itself in unity through the whole operation. In this manner only can the agency conjoin that which is diverse through which it passes, and construct a real form as product of its movement, and leave it as a result within a pure intuition. We will call this condition—*The Unity of the conjoining agency.*

2. *There must be more than the unity of conjoining agency.*—An agency in unity throughout, moving through the diverse points and instants in pure space and time, and performing its work in conjoining the diverse points and instants in unity, could not yet accomplish anything toward

giving its products as real forms to the apprehension, when the operation went on in darkness. A mere blind movement could make no product to appear, and hence its whole work would yet be as nothing. The perpetuated movement must be itself in the light, and the whole process of conjunction go on in the light, and thereby its product be put altogether in the light, or the whole movement of the agency must be in vain, and its results hidden from all possibility of a revelation.

And here we must determine what Consciousness is to subserve, in this process, toward the apprehension of the pure object; for this light of which we are here speaking is the very thing we mean by consciousness. This has certainly been very variously described, doubtless very differently conceived, and not seldom very much misconceived. If we will allow the conception to fashion itself under the analogies of an inward illumination rather than as an agent, or any faculty of an agent, or any act of such faculty, we shall come the nearest to the reality. When the spontaneous agency of the intellect, as productive imagination, has conjoined the diversity in the primitive intuition in unity, and thereby constructed the pure form as its product, no further *action* is necessary to be supposed. The whole process of the construction, and the completed product, all stand out in the mind's own light, and such illumination will be available to reveal what has been done, and to show the product. The pure object is put within this light, and thus the mind possesses it in its own illumination, and this is the same as to say that the object stands in consciousness. Not as an act, but as a light; not as a maker—for that is the province of the intellectual agency—but rather as a re-

vealer: after such analogies shall we doubtless best conceive of consciousness, and which may thus be termed "the light of all our seeing." In this conception, the difficulty of cognizing consciousness and determining precisely and affirmatively what it is, becomes very obvious. It may be competent to evince for itself *that* it is, while it is not competent that it should give any representation of itself determining *what* it is. All the intellectual constructions as products appear in consciousness, but we have no circumscribing agency and light out of consciousness, by which consciousness may itself be made to appear. It is that inward illumination in which all that is therein constructed may appear, while itself is a light too pure and transparent to admit that it should be seen.

And further, with this conception of consciousness, it is also manifest that it must possess unity. Were the conjoining operation to be at this point or instant in one light of a consciousness, and in a diverse point or instant in another light of a consciousness, the former manifestation would be separate from the latter, and no perpetuated appearance of a pure form could be effected. There would be a separate revealing for each moment of the constructing agency, and in this way only a flashing and extinction of light which would be a diverse consciousness for each point or instant of space and time, and in this conception, no continuity of process nor perpetuity of appearance would be possible. The light of consciousness in which the conjunction is effected must be throughout in unity or neither the construction nor the apprehension can be completed.

And here, let us go back to our first *a priori* position in the primitive intuition. When we made abstraction of all

that had been given in the sensibility, and thus left the real form of the phenomenon; and then made abstraction of the real form as definite figure or period, and also took away all connection of the diverse points and instants, and thus left the primitive form of space and time in their limitless and unconstructed diversity; we did not extinguish any light in which either the phenomenon, or the real form, or the connected diversity had appeared. That light still remains and gives us the limitless diversity of pure space and time, which no abstraction can remove. It is now, it is true, wholly subjective, and exists in the primitive intuition only, and so far has significancy only for that mind within which the primitive intuition is; but it is there as a light revealing a pure diversity, in which nothing is needed but new constructions to be given, and real forms and phenomenal content again appear. This light of the primitive intuition is essentially one in its own unity, for it has the limitless diversity of space and time beneath it, and all agency that may operate to conjoin, and all products that may be conjoined in pure space and time, must be illuminated and revealed thereby. That original faculty of the primitive intuition, which *is* when all that has been given to it has been taken from it—which must *à priori have been* in order to that experience of the phenomenal which was abstracted from it—that, essentially, is in the subjective being, as conditional for the possibility of apprehending any thing which the productive imagination may construct, or the affection in the sensibility may present, for phenomena. This one illumination, which as primitive intuition gives pure space and time, as pure intuition gives all real forms constructed, and as empirical intuition gives all that is phenomenal, is the one

constant and perpetual light of consciousness revealing all that in any way is put within it. And this self-sameness of light, in which all that may be constructed must appear, we will term—the *Unity of consciousness*.

3. *There must be more than the unity of the conjoining agency and the unity of consciousness.*—Were the agency to be in unity, and the consciousness also in unity, yet if the agency and the consciousness were diverse the product constructed by the intellect could not appear in the consciousness. The agency might conjoin, but it would be in darkness; and the consciousness might stand as a light, but it would possess nothing that might appear. The intellect would act with its back to the mirror, the mirror would be incompetent to envisage for itself the products in the plane of its own surface. Both the agency constructing and the consciousness revealing must be in unity, and thus what the intellect constructs that also the consciousness reveals in the same subject.

And this unity of intellectual action and conscious revealing is not only necessary as condition that the construction and the revelation may be given in one subject, but also necessary that there should be any intellectual construction at all. The primitive intuition of pure space and time must give all diversity in which the conjunction of real forms can be effected, and therefore, to the productive imagination, it were impossible that any pure object should be attained except as constructed in that diversity which is in unity with itself, inasmuch as otherwise there can be no *pure* form within which it might construct the *real* form. The same light of an intuition, which gives the diverse points and instants in the pure space and time, must also give the con-

structing agency through all its process of conjoining, and also give its product as completed pure object.

And here, this one subject, in which is the unity of both constructing agency and revealing consciousness, may be termed *the self*; and thus this unity of agency and of envisagement will be a unity in the self, and may be termed—*the Unity of self-consciousness*.

In order to the possibility of a conjunction in unity of that which is diverse in the primitive intuition of pure space and time, and thus in order to any possible apprehension of quantity, the unity of self-consciousness is necessary; and in which is comprehended the unity of the agency, the unity of the consciousness, and the unity of both in the same subject as a self. It might here be competent, perhaps, to push the *à priori* analysis of conjunction into another department higher up, and investigate what are the primitive types conditioning all constructions of regular forms from the diversity in the primitive intuition, and what thus would give an *à priori* scheme, as it were, for the regulation of the intellect, as productive imagination, in constructing its diagrams as pure objects in space and time, and thereby the more effectually determine what the imagination must be in its primitive sources; but for all the purposes of attaining to the sense in its subjective idea in the pure intuition, the diversity given in the points and instants of pure space and time as wholly unconjoined and limitless, and yet which may be conjoined and limited in all possible figures and periods, is in itself sufficient; for it enables us to give an *à priori* examination of the whole process of conjunction, both in what is conditional in the result itself as quantity, and in the constructing and revealing agency as self-consciousness

It should further, as a caution, be here added, that not the intellectual agency is self, nor the revealing consciousness is self, but their unity is *in that* which we here term the self. We are not here in a condition to investigate any thing at all relatively to a common subject for the agency and the light in which the constructed product appears. This belongs wholly to the next part in the faculty of the understanding. This much only is it here necessary to determine, that for the possibility of all conjunction as giving a quantity in space and time, the agency conjoining and the consciousness revealing must stand together in unity, and which we term the unity of *self-consciousness*, though we do not here determine any thing about this *self*, as common subject for the imagination and the intuition, the constructing agency and the envisaging consciousness.

From the progress we have now made, and the position to which we have here attained, in the rational cognition of self-consciousness, it is competent to answer several queries, and settle some important doubtful matters, in reference to the process of perception; and which, except for such an *à priori* investigation, must hereafter be as they have heretofore been, inexplicable mysteries. We will here indicate the questions and their solution in a cursory manner.

Thus, it is quite explicable why the constructed product should become *an object*.—The constructing agency has put limits, and thus given definite outline, to what is now a precise quantity in pure space and time, and thus space and time are no longer void, unconjoined, and limitless, but possess a completed form as figure or period, and this directly within the intuition as having its unity in a self. This definite form is thus thrown face to face, directly

before the self in its intuition, and is thus an *object* to the apprehension (*obvius jaciens*). The object, as *pure*, is in the imagination only, and thus wholly subjective and that which *seems*; but still a real form for any possible content that might be given in the sensibility, and when filled by such content as its matter, becomes phenomenon as perceived object, and which then *appears*.

And further, it may be manifest how this is *my* object. The constructing agency and the light in which it is revealed have their unity in *my* self, and hence both the conjunction and the envisaging are *mine*; and as in this process the product is given and apprehended as object, it becomes both an object *to me* inasmuch as it is thrown before me, and *my* object inasmuch as it is *my* construction and *my* presentation. I *myself* can have no pure object which I do not by *my* productive imagination construct, and which also I do not construct in *my* consciousness; and both because I myself construct, and I myself envisage, it becomes that I myself have a pure object.

It is also manifest why pure objects in space and time must be wholly *incommunicable*.—The primitive intuition is wholly subjective; the conjoining and the envisaging are both also wholly subjective; and thus the pure object is object only in my subject. The line I draw, the circle or other figure I describe, the period which I limit, become pure objects only to me, and can not themselves be communicated to any other subject. The communication can only be by symbols, and inducing that the agency and light in unity in a diverse self should construct and reveal similar pure objects, in his subjective apprehension. The possibility of the communing in my pure objects by another subject

would demand that this diverse subject should be competent to envisage the *self* in which is my imagination and my consciousness united; and then, such *other* self could "search my heart, and try my reins." As if two mirrors were self-conscious, they could only subjectively envisage without the possibility of communication among themselves, but the self which might envisage them, could well see all that was in them.

We may further learn why the self *can not become object to itself*.—Only that which may be constructed in the primitive intuition of pure space and time can become object. The agency as process of conjoining may go on within the primitive intuition, and the pure product as quantity constructed may also stand out in the consciousness; but the self in which the conjoining agency and revealing consciousness have their unity must of course lie back of the primitive intuition, and can not be brought by any construction within any of the conjunctions that its diverse points and instants may receive. The primitive forms of space and time are conditional for all real forms that may be constructed within them, and this can be only of figure and period, but the self can not be subjected to such conditions, and can not therefore become object. That the self should become object would demand that we should see *through*, and not merely that which is *in*, the envisaging mirror.

It may also be disclosed, here, how we may come to the conviction *that* a self is, while we can not yet determine at all *what* the self is.—*What* the self is we can not here at all determine, inasmuch as all the intellectual agency which we have yet attained is simply that of conjoining in unity and constructing the forms for phenomena, while the self can not

be phenomenon nor be constructed in the shapes of space or the successions of time.

But the conviction *that* a self is originates fairly in this that the unity of constructing agency and revealing consciousness is conditional for all possible pure objects. Our agency, as intellectual, must be in perpetuated unity; our revealings in consciousness, must be in a unity of consciousness; and both intellect and consciousness must be in unity; and thus a higher subject as self must be, though we are not yet prepared to say any thing about it, for a merely conjoining agency can do nothing with it.

Finally, it may be explained in what way *we awake in self-consciousness*.—The spontaneous agency (no matter here whether we include the content in the sensibility or not for our present purpose as an example) constructs its product in space and time, and this becomes an object in consciousness. This produced object is distinct from the constructing agency (and more especially so when the matter in the sensibility is given), and both it and the process of its construction are in the immediate intuition, and thus in the light of consciousness they are diverse from each other. The agency and the consciousness are referred in their unity to one self, which is the *unity* of self-consciousness, but the object can not be so referred; that is other than self, a *not-self*; and this discrimination between what is from *self*, and what is from *not-self*, is the *finding of myself*. In proportion as such discrimination is absent, in infancy, in syncope, delirium, somnambulism, or high mental excitement and passionate absorption, the man has lost himself; is beside himself; not self-conscious.

We have now attained the Idea of the Sense in the *pure*

Intuition. It is hence quite competent to state how a pure sense may be which may give pure objects in a consciousness. A primitive intuition must have pure space and time in its limitless diversity, as primitive form for all possible real form which may be given in space and time. An intellectual agency, as productive imagination, must construct these real forms by conjoining the diverse in pure space and time; the process to which result must possess the three elements of a *unity*, inducing a *plurality*, and which is completed in a *totality*; thus giving a definite *quantity* as product. But in order to the possibility for such conjoining agency there must be the unity of the agency, the unity of the consciousness, and the unity of both agency and consciousness in the same self, and which is *the unity of self-consciousness*. In this way, a pure object in space and time may be determined as *my object*. The whole may be concisely expressed in the following *à priori* formula, viz.: *All possible pure object must be conjoined by the intellect in the primitive intuition, under the unity of self-consciousness.*

All this is an idea of the faculty of the sense as wholly pure from all content in the sensibility, and thus wholly *subjective*; and the pure objects are given incommunicably to any other subject than that in which is the agency and the consciousness. It remains, in order to the completed idea of the sense, that we attain the Idea in the *empirical Intuition*, which will now introduce the *Second Division*.

SECOND DIVISION.

THE IDEA IN THE EMPIRICAL INTUITION.

SECTION I.

THE ATTAINMENT OF AN A PRIORI POSITION THROUGH A PROLEPSIS.

ALL intuition is an immediate beholding. In the *primitive* intuition we immediately behold space and time as pure diversity. In the *pure* intuition we immediately behold any definite figures or periods constructed in pure space and time. When a content in the sensibility gives the matter for some phenomenon as quality, and this is brought directly within the light of consciousness, this also we immediately behold; but inasmuch as this is empirical and not pure object; so the distinction is made for it by calling it *empirical* intuition. In all perception of objects in the sense this content in the sensibility is given, and as the *quality* of the phenomenon, its *a priori* investigation is as necessary to a complete idea of the sense as the process of its construction into *form*. This, therefore, is the design of the present Division, to attain the subjective Idea of the Sense in the *empirical Intuition*.

The first requisition is that we attain a determinate transcendental position from which an *à priori* examination may be had, and in which all our conclusions shall carry with them the demonstrations of universality and necessity. We should wholly fail of attaining such a position through a process of abstraction, as before for the primitive intuition of space and time. An abstraction of all content from the sensibility would be a void of all matter for phenomena, and thus the nihility of all empirical intuition. An empty organism of sense gives no condition for any intellectual operation, as does the pure diversity of space and time in the primitive intuition for the construction of pure figure and period. We are then forced to some other method of attaining a position back of all experience, from whence to attain those conditional principles which make the experience of perceived phenomena possible.

That there should be some content in the sensibility in order to sensation, and thus a condition given for empirical intuition, is at once seen to be a universal necessity. An *anticipation* of such content in general, as condition for any and all perception of phenomena, and in the conception of which an occasion may be given for determining what intellectual operation is necessary universally for bringing such anticipated content under an empirical intuition, will give to us our determined *à priori* position. Such a general anticipation of content in the sensibility, as conditional for all possible empirical intuition, will put us at once above all experience in the sense, and give to us an occasion for investigating the whole ground of possibility for bringing such content within the light of consciousness and thereby making it to be a perceived definite phenomenon. We

shall in this be restricted to no partial organism of the sensibility, but whether there be five or fifty sources of organic sensation, and each of these organs be competent to receive content of a thousand-fold variety, still the same conditional principles for bringing any and all under an empirical intuition must be universally necessary. We start from this general anticipation of content, and in it determine what is universally necessary that it may be possible to appear as phenomenon in consciousness, and in this we attain an *à priori* subjective idea of the entire process of empirical intuition. The position is attained not by an *abstraction* but by an *anticipation*. Such an anticipation was by the old Greek philosophers termed a Prolepsis (*πρόληψις*), and we here use it as inclusive of mere content in general for all possible phenomena.

It will be necessary to determine how it is possible to bring this content in general into *qualities distinct* one from another, and also how to order this distinct quality into *definite forms*, so that one phenomenon may be both distinct in quality from all others, and definite in its own form, as appearing in the consciousness. We shall thus have the conditions of two separate processes of an intellectual agency to investigate, viz., that of *distinguishing* the content, and that of *constructing* the distinguished quality into a definite form. We shall in this have the subjective Idea of all perception of phenomena, both as distinct in quality and definite in form; and this is inclusive of the entire intellectual operation which is conditional for all possibility of complete empirical intuition, or, as the same thing, clear perception of phenomena in the sense. The idea of *the operation of* CONJUNCTION has already been attained in the

bringing of pure space and time into definite figure and period, and it remains, here, that we investigate the primitive elements of *the operation of* DISTINCTION; and then that we show how the primitive elements of conjunction, already attained in pure intuition, apply also to empirical intuition, or the perceiving of phenomena.

SECTION II.

THE PRIMITIVE ELEMENTS OF ALL POSSIBLE ANTICIPATION OF APPEARANCE IN THE SENSE.

SENSIBILITY is the capacity of being affected by the presence of some content which is from somewhere given to it. The affection is a sensation, and answers to the content by which it has been induced. It may thus be manifold in its diversity according to the diversity in all possible content which may affect the sensibility. As many diverse *organs* as may be given for the functions of the sense, so great must be the possible diversity of the *kinds* of content that may be received; and as diverse as the *impressions* given inducing in each organ its diversity of affection, so much may be the possible diversity of the *varieties* of content that may be received. Thus, the eye as organ, may receive one kind of content, and the ear as diverse organ another kind, etc., and thus the *kinds* be diversified through all possible organs. The eye again may receive its content of all possible diversities, inducing all possible diversity in its sensation, and the ear and all other possible organs in the same manner, and thus there may be a diversity of *varieties* in the sensation

through all possible content. The diverse organs will give diverse kinds, and the diverse affections in the same organ, and this through all possible organs, will give the diverse varieties possible. All possible diversity of sensation may thus be given in an anticipation of all possible content in the sense.

The prolepsis in the sense is that of a universal anticipation of content in all possible kinds and varieties; inclusive not only of that which conditions our human perception, but of all possible perception of phenomena in any sense. And of this universal prolepsis of content we now determine that it may have all possible diversity of kind and variety, and thus be wholly undiscriminated and undistinguished. The sensibility may give all possible diversity of content in all the kinds and varieties of sensation, but the sensation completed is all that the functions of the organic sensibility can accomplish. The sensibility distinguishes nothing, but only gives content in its diversity which must be distinguished by an intellectual agency. Were there no other functions than those in the sensibility, nothing could be determined in its own distinct appearance, but all must remain in the chaotic confusion of undiscriminated diverse sensation. An intellectual agency must first brood over the chaos, or no one kind or variety can come out in its distinctness in the consciousness. {An agency is demanded which may distinguish amid the kinds and varieties in the sensation. The intellectual agency in distinguishing must perform a different work from that already examined in constructing, and this process of distinguishing needs now to be as carefully investigated as has before been effected for the process of constructing definite forms in pure space and time. In

construction, the work performed was that of a conjoining in unity; in distinction, the work performed is a discriminating in an individuality. The one attains forms in conjunction, the other attains appearances in distinction; one produces its object by collecting the diversity into it, the other finds its object by excluding all diversity from it. This *Operation of Distinction* is that which we now proceed to examine, that we may attain all the *primitive elements* which must be found within it.

1. Our universal anticipation is inclusive of all possible content in a sensibility, whether of an outer or an inner sense, and of all possible kinds and varieties; and as thus wholly undiscriminated, it demands that what is to be a precise appearance in the consciousness, should be completely distinguished in its sensation from all others. Content must first be given to the sensibility, and by discriminating and excluding all diversity from it, that content is found in its own distinct phenomenal quality in the consciousness. A void sensibility can offer nothing to be distinguished, and the sensibility has itself no function for producing content within itself, and thus from somewhere other than itself must the content come. The intellectual agency as distinguishing operation has first to be supplied with a sensation, which must be induced by some content affecting the sensibility; and the apprehending of this involves a discriminating it from non-sensation, and thus a determining that the sensibility is not void. The distinction here is between content and a void, sensation and non-sensation; and this intellectual taking up of some content is henceforth in the process an exclusion of all non-content from the apprehending agency, and the determination that some of

all possible diversity of sensation appears in the consciousness. There is something as opposed to nothing which appears, and in this distinction of appearance from non-appearance in the consciousness is first attained the conception of a phenomenal *reality*. Some matter now stands in the consciousness, which has been found by the agency that discriminates sensation from non-sensation; and this is the first element in the operation of distinction, viz., *Reality*.

2. It must be manifest that a completed work of distinction is not given in this, that some content as opposed to non-sensation appears. It may be any one of all possible realities in appearance, and in order to its precise determination in the consciousness, it must be competent to deny of this that which may be in all other appearances beside this. That it is real appearance is a determined distinction from non-appearance only, and it needs further to be determined as distinction from all other possible appearances. The intellectual agency must, therefore, proceed in its distinguishing work, and exclude from this appearance all other possible appearances, and thus affirm for it the absence of all other reality than that which is its own. To effect such further distinction, all other diversity must be cut off from this reality, and stand over against this as other than, and the contrary of, this. All other realities excluded from this determines their distinction from this, and thereby particularizes this in the discrimination of all others apart from this. This denying of that which is in any other possible reality to be in this present apprehended reality excludes all other reality, and makes this a discriminated *particular*. We have, therefore, in this further process of distinction,

added to the element of reality, this second element of *Particularity*.

3. That we have distinguished the real from the non-real, and also the particular from the universal, has not yet completed the work of distinction. We may be able to affirm of any real appearance that it is not any other appearance, and this will be but negative determination. To say of some appearance, this is not color, nor sound, nor taste, etc., and in reference to variety, this is not redness, nor greenness, nor whiteness, etc., and so also of the internal phenomena, this is not thought, nor volition, nor grief, nor joy, etc., and to carry this discrimination so far as to deny all other and thus particularize this, would still only be to affirm what it is not. It discriminates and thus determines negatively, but finds nothing positively. It is preparatory to a completed distinction, but is not the consummation of the work. The distinguishing agency must now advance to an individualizing of this particular reality in its own appearance. It must affirm more than what it is not, even what it is; more than what is excluded from it, even that which is included in it. That must positively be found in it which is not in any other reality, and thus it must separate itself positively, and not merely negatively from all reality but itself, that it may appear in consciousness having its own *peculiar* phenomenal variety. This will add to the elements of reality and particularity, the third element of *Peculiarity*.

It is, moreover, *à priori* manifest, that not only must all complete distinction include the elements of reality, particularity, and peculiarity, inasmuch as nothing can be distinctly apprehended except as a reality which is particular from all

others and peculiar in itself; but that also no operation of distinction can have more than these three elements, for when the appearance is apprehended in its reality, particularity and peculiarity it is completely discriminated, and no work of distinguishing can be carried forward any further. The operation of distinction is always complete in this, that it finds a reality, particularized from all others, and peculiar in itself, and thus a precise appearance is given in the consciousness. This operation of distinction, as an intellectual work bringing the diverse sensation into a precise appearance in consciousness, may properly be termed *Observation*. The completed result as precise appearance in consciousness is *Quality*. All sensation as distinguished in a complete observation becomes quality, and may be of different *kinds*; as colors, weights, sounds, etc., and also of different *varieties*; as red, green, yellow, etc., and also differ as *inner appearance*; as thought, feeling, volition, etc. All quality is educed from sensation, the sensation being taken up by the intellectual agency, and in its distinguishing operation found thereby to be a reality, particularized from all others, and peculiar in its own phenomenal being.

We have, in the attainment of these primitive elements of distinction, kept the *result* of the process in view rather than the process itself, and have thus noted what has been *found* by it in the universal content anticipated, as before in the constructing process of conjunction what was *produced* by it in pure space and time; and we attain thus, not merely what *our* subjective faculty of judgment may accomplish, but what must be effected by *all possible* faculties in order to the precise discrimination of any quality in the consciousness. All possible distinguishable quality must

possess reality, particularity, and peculiarity. The operation of Distinction in all possible sensation must find these primitive elements, so many and no more.

It must also be here noted that some things are conditional in order that a distinguishing *agency* may be, as we before found conditions for the possibility of a conjoining agency. We need here merely to notice them cursorily, as what was given above more fully will be mainly applicable to the agency discriminating as well as the agency constructing. There must be the Unity of discriminating agency, or the diversity in sensation could not be distinguished, inasmuch as what was taken up at one apprehension would else be lost at another. There must be a Unity of the sensibility also, or one kind of sensation would belong to one subject, and another kind to another. And both distinguishing agency, and sensibility must be in Unity of consciousness, or the content to be discriminated could not be put in the same consciousness as the distinguishing operation. And, lastly, all must be in the higher Unity of the same subject, that both the sensation, the distinction, and the consciousness, may belong to the same self, and thus what the self has in sensation, the same self distinguishes, and the consciousness in which all appear is also in the same self; and which may be termed as before the *Unity of self-consciousness*.

We may thus affirm, as an *a priori* cognition, *that all possible quality must be discriminated in the elements of all Distinction, viz., reality, particularity, and peculiarity*. This would give the idea of the sense in its *content* for a phenomenon, as an anticipation of all possible content in sensation; but thus far the matter is only *distinguished*, not

conjoined into form, which last must be effected in order that it may come within an empirical intuition; we will then now attain the process for *a priori* giving *form* to the content as distinguished, and thus complete the Idea in the empirical Intuition.

SECTION III.

THE A PRIORI DETERMINATION OF WHAT DIVERSITY THERE
MUST BE IN ALL QUALITY.

VOID sensibility can possess no sensation. It is no matter of consideration here whether the sensibility be itself more or less sensitive. There may, doubtless, be a readiness to become affected, in different sensibilities, through widely different degrees. It may be that in us men, there is far less capability of being affected by a content in our sensibility, than would be in beings whose perfection of sensibility was the highest possible. Perhaps an organ of sense sufficiently perfected might be so affected by the content given in magnetic or electric influences, or in chemical elective affinities, or even in the light itself, that it should give to the discriminating agency of the intellect sensations which might be precisely distinguished, and thereby unridle all those mysteries which are now mere hypothesis and theory, and make them to be plain facts in perception. Nor is it of any moment here to determine how comprehensive a sensibility may possibly be. It may be conceived that new organs of sense should be indefinitely added to our five or six, and that the field of perception should thus be indefin-

itely augmented. But whether the sensibility be more or less perfect in sensitiveness, or more or less comprehensive in varied organs for receiving content for sensation, this is universally true, that all sensibility of all possible perfection and compass must have its content from somewhere given to it, in order that any affection as sensation should be given in it. No quality can appear, except as its content to be distinguished has somehow been given in a sensibility.

And now, all quality as thus anticipated may admit of a diversity in two different directions of consideration. The content in the sensibility inducing sensation may be diverse. It may be given through different organs of sense, and thus be diverse in *kind*; it may give different sensations in the same organ, and thus be diverse in *variety*. Colors, sounds, smells, thoughts, feelings, etc., are all diverse in *kind*: and thus with all possible organs and faculties of an outward or inward sensibility. Red and blue; bitter and sweet; warm and smooth; joy, grief, hope; conception, recollection, etc., etc., are all diverse in *variety*; and thus through all the difference of sensation that may be given within the same organs and faculties of an external or internal sense. In all this diversity as appearing in the content, there is difference as contrariety in the *reality itself*, and the diverse may therefore be termed that of the *heterogeneous*. This diversity as heterogeneous in quality has already been sufficiently explained in the consideration of the operation of Distinction in its primary elements. All such diversity possible is ordered in the appearance through a process of distinguishing in an intellectual agency. All possible diversity of quality, which may be made to appear in consciousness, and which is heterogeneous in itself, must be determined in an

operation of Distinction. Sufficient attention has, therefore, already been given to the process for determining all possible diversity which is *heterogeneous*.

But in another point of consideration, the quality has a diversity in another manner. All the redness, or the coldness, or the grief, which is given as appearance from the same separate sensation, has in itself no contrariety but has similarity throughout. And yet there is diversity, for the redness of one place is diverse from the redness in another, and the coldness of one period is diverse from the coldness of another, and the grief rises or diminishes in diverse degrees; and thus in all, there is diversity which involves no contrariety of the reality itself, but which possesses similarity thoroughly. This diversity, then, may be termed the *homogeneous*. And as this has not at all, as yet, been considered, and as in the ordering of this diversity homogeneous in the appearance will be found all that belongs to the *form*, and in this also all that can come into an empirical intuition, and therefore all that may be embraced in the idea of the sense as in the empirical intuition, it becomes necessary clearly to apprehend this homogeneous diversity, and the whole process of its becoming an ordered *form* for the *content* given in the sensation. The object in this section is, to determine this universal possible diversity of quality.

1. Of all possible quality which may be determined from anticipation of content in the sensibility, a distinction must be made between it as a *reality*, and a void sensibility which can give *no reality*. We may, therefore, take any reality as quality, and while homogeneous in itself, it may vary in amount indefinitely. The intellectual distinction from the non-real to the real has simply the limit, as zero, between

them. On one side is the negative of all appearance and reality; on the other is a precisely discriminated appearance and reality; and this, it is manifest, may vary in amount from the least possible degree of that reality which can appear, up to the highest possible which can be given in an appearance. This difference of degree possible is a diversity in the anticipation, and includes all possible diversity of that reality; and as it is a diversity throughout in the same reality, it has similarity and not contrariety. It is thus a homogeneous diversity. And inasmuch as the amount is determined from the given sensation as degree of affection in the sensibility, it is a homogeneous diversity which should be characterized by a term expressive of its genesis. The amount of the pressure as heaviness, or of the color as brightness, is as the intensity of affection in the sensibility; the intensity of the sensation giving the amount in appearance, and thus having a homogeneous diversity from the point of no sensation up to the given sensation. We may, then, as characteristic of this homogeneous diversity, term it a diversity as *Intensive*.

2. Though as reality, the quality may have a homogeneous diversity only as intensive, and thus through all its amount, yet in another point of view a homogeneous diversity is in another manner given. The quality, as that of an external sense may occupy more or less of space. The content given in sensation thus considered stands in space as the homogeneous through all the place it occupies, and it becomes thus a diversity in the empirical intuition precisely as pure space is a diversity in the primitive intuition. The reality is homogeneous in the same place that the pure space is homogeneous, and thus has a diversity of itself in every

point of space in that place. Quality, thus, may be homogeneously diverse in place; and as characteristic of this specific diversity, as it fills more or less extended place, we will term it diversity as *Extensive*.

3. Quality may have diversity intensive and extensive, not only, but also in another manner there may be homogeneity through a diversity. The reality as appearance is given during the continuance of the sensation. So long as the content in the sensibility affects this sensibility in the same manner, the sensation is similar and homogeneous throughout, and thus the homogeneous reality occupies the same succession of instants in pure time for the empirical intuition, that the pure period does in the pure intuition. As the instants in the pure period are homogeneous and diverse, so the reality occupying this period is throughout homogeneous, and in each instant diverse. The reality is homogeneous in the same period that the pure time is homogeneous, and thus has a diversity of itself in every instant of the time it fills. Quality may thus be homogeneously diverse in time; and as descriptive of this manner of homogeneous diversity we may term it the *Protensive*.

Now an intellectual agency must *distinguish* the heterogeneous, and *conjoin* the homogeneous diversity. And this conjunction of the homogeneous will give *form* to that matter, which has been distinguished in the heterogeneous diversity.

SECTION IV.

THE CONSTRUCTION OF THE HOMOGENEOUS DIVERSITY OF
ALL POSSIBLE QUALITY INTO FORM.

THERE are two main questions which may be asked concerning any anticipated content in sensation, and which must be answered as conditional for all distinct and definite appearance in consciousness. The first is—*What* is the quality? The process for arriving at an answer to this, has already been indicated. It must be through the operation of *Distinction*. The intellect as discriminating agent must take up the sensation and determine it in its reality, particularity, and peculiarity; and such agency places it in its own precise distinctness of quality immediately in the light of consciousness, and capacitates us to say directly *what* it is. Thus far it is properly observation, and this determining of quality in its *distinctness* is all that observation can accomplish.

A second question is—*How much* is the quality? The process to the attainment of an answer here is by a different operation than that of distinction altogether. The quality is contemplated as having quantity, and the intellectual agency is to be employed in determining how much quantity. And now, in our first Division in this Chapter, we attained the *a priori* process for the production of all pure quantity through a conjunction in unity, the application of which to the distinct quality must be our only method for determining how much it is. All quantity has its quality, and all quality has a quantity. The only quality which any quantity

may have is, that it is *extended*; and, as all extension is determined only by a conjoining agency, so both the quantity and its quality are given in the same constructing operation. A conjoining act gives both a quantity and also that the quantity has extension. There is, therefore, in the determination of quantity no operation of distinction demanded, for its precise quality is given in giving itself. There is nothing to be discriminated in extension itself as a quality, but only that it be determined whether the extension be pure or empirical.

But not thus with the quality. The agency which discriminates this, and thus gives it precisely and distinctly in the consciousness, has not accomplished the whole work demanded. The operation of distinction has given quality only, and quality has quantity which no distinguishing agency can determine. In addition to the operation of distinction there must also be the operation of conjunction. While, therefore, we could finish our work in the construction of quantity by one operation of conjunction, in relation to quality we must apply both operations. To find the precise quality, what it is, we must distinguish; and then, to find how much it is, we must conjoin. The distinguishing process has been already given; we have here to apply the conjoining process. This will demand a constructing process in a three-fold order of operation, inasmuch as the homogeneous diversity to be constructed is three-fold. The question, How much is the quality? may mean, How much as *Intensive*, as *Extensive*, or as *Protensive*? *i. e.*, how much in the sensation? how much in space? and how much in time? Only in the answers to these three inquiries, do we exhaust the quantity which is to be found in all quality.

The operation in distinction we have said to be *Observation*; we shall now find the operation in conjunction to be *Attention*. Attention not only extends the intellect to the content in sensation, but includes the operation then performed in constructing it, and which puts the *form* of the content in clear consciousness. The applying of the intellect to the content in sensation may be by an act of the will, or it may be spontaneous, as must have been the first agency in childhood, and as often is in adult life. But the attending act (*ad tendo*) is the intellect *stretching* or *extending over*, and thus circumscribing or constructing the content in its complete form; and this is none other than the operation of conjunction in unity.

In pure space and time the definite form as quantity is to be constructed by an intellectual agency in its spontaneity, moving over the diversity in its manifoldness and conjoining it in unity. The same work must also be effected for the content in sensation through its three-fold diversity as intensive, extensive, and protensive. The difference is only in this, that the pure diagrams in space and time must be constructed according to some scheme in the productive imagination; but the empirical forms must be constructed according to the content as given in the sensation; the work of construction is precisely the same in both—the *conjunction of the diversity in a unity, plurality, and totality*—and thereby giving completeness to the quantity of the quality already distinguished. The act of observation is thus to give *distinctness* to quality; and the act of attention is to give *definiteness* to quantity: in observing, we distinguish it from all other quality; in attending, we limit it in its own quantity: in the first, we get the *distinct quality* of the

phenomenon; in the last we get the *definite form* of the phenomenon. We will now at once give the latter process in its three-fold application to the homogeneous diversity.

1. The diversity as *intensive* is given wholly within the sensibility, and is the manifoldness of degree from no sensation upward to the intensity of any given sensation. In order to attain the form of the quality as to how much in amount, this diversity in the sensation must be conjoined in unity into one total quantity. The intellect, as constructing agency, must commence from zero in the sensation, and conjoin the diverse degrees of intensity through all their multiplicity up to and terminating in the degree that limits the intensity of the given sensation, and such completed product is the quantity, or form in intensity, of that given quality. Such construction, as attending agency, brings the quantity of the intensity into immediate consciousness, and we perceive how much in amount the quality is.

Thus, I have the sensation of a *pressure*, and by observation I distinguish the sensation as *heaviness*. By attention I go over and conjoin the diversity from no heaviness up to the intensity of pressure as given in sensation, and I perceive there is *so much* weight.

So also, I have a sensation which in distinction I observe to be sound, and in further discrimination I observe that there is a great variety of sounds, and this is the utmost which any distinguishing agency can here accomplish. But I attend to these various sounds, and thus construct their quantity, and I at once perceive their various degrees of intensity, and can now discriminate by other faculties, which need not here be noticed, what is going on in these

sounds and binding them in unison as a definite harmony into their tune.

So, with an anticipated content in the organ of vision inducing sensation, I discriminate and observe light; and at different times distinguish the peculiarities of sunlight from moonshine. Here is the completion of what appears from observation. But I attend in a constructing agency and conjoin the degrees of intensity in the sunlight, and again in the moon-light, and I thus perceive *how much* light in both separately, and can now determine that it requires so many thousand times the intensity of the moonlight to equal the intensity of the sunlight.

Thus of any inward sensation; I distinguish, and observe myself to be grieved; I construct the degrees of intensity in attention, and determine the amount of my grief.

Thus in all diversity as intensive, the operation of distinction can give only the quality in its peculiarity; the operation of conjunction must be conditional for bringing the *amount* of the quality into consciousness. Except as this conjoining agency goes through the entire diversity of the sensation, it is impossible that the quantity of the quality should be perceived.

2. The diversity as *extensive* is the manifoldness of the points in the content of sensation, as occupying so much space. The precise quality having been discriminated, the question is, not how much as intensive, but how great as extensive? The matter having been determined in distinct observation, the form must be determined in definite attention. A conjoining agency must pass over these diverse points and bring them in unity in the same manner as before shown in pure space, with this difference only, that in

pure space the constructing agency is guided in its work by some scheme in the imagination, but in the anticipated content it must be conditioned by the sensation. This construction completed, determines the form of the quality as figure in space.

Thus I anticipate a given sensation in a resistance to touch, which as precisely distinguished I term the quality of *solidity*. Without determining the form as intensity, *i. e.*, how hard it is; I only seek the form as extension, how large it is. I must pass my organ of touch over the matter and bring it successively in the sensation, and the attending agency must construct the whole by joining the diverse points in unity and thereby give definite limits to this solidity; and then affirm the quality to be of such a figure, and to fill so much of space. The matter has thus a definite form, as so great extension.

So again, with an anticipated content in the eye, as organ of the sensibility, which in distinguishing I term color; and in further observation I attain the varieties of the color, say now specifically green and white. I must now apply a constructing agency, and in attention I conjoin the greenness into figure, and determine the magnitude and outlines of a verdant court-yard; and I conjoin also the whiteness, and determine the size and proportions of the dwelling-house, and its position relatively to the outlines of the yard in which it stands. I have thus brought the matter, as quality in sensation, into definite form.

Thus with all quality that can have extension. Distinction gives the quality, conjunction determines how great a space it occupies; nor can the form as extensive otherwise be determined. Without observation the consciousness

would be "void," and without attention the quality in consciousness would be "without form." Sensation may be perfected, but it is utter chaos except as an intelligent spirit, in its distinguishing and conjoining agency, broods over it.

3. The diversity as *protensive* is in the manifoldness of the successive instants through which the appearance as quality is prolonged. Of any distinct quality, we may enquire, not merely, how much? as intensive; nor how great? as extensive; but also, how long? as protensive it endures. And for the determination of this, the same process of conjunction in an attending agency is necessary as in the construction of period in pure time, except that the conjoining agency is conditioned to the sensation in its beginning and determination, and not to any scheme of the imagination.

Thus an anticipated sensation in the ear, as organ of the sensibility, may be taken and distinguished as *sound*. I do not now enquire how loud, nor how distant it may be, but only how long does it continue? I attend to the passing affection of my inner state, and conjoin the instants from the beginning to the termination, or to any given instant in the prolongation of the sensation, and thus determine the period which the sound occupies; and thereby affirm that it has endured so long. And in the same way, for the form of all possible quality for duration in time; my attending agency must conjoin the diversity, and thereby construct the definite period.

And now, in these three diversities, as the manifoldness of degree, of extent, and of duration, all possible quantity which any quality may possess may be constructed, and thus all possible form be determined for all matter. Inten-

sity in the sensibility, extension in space, and prolongation in time include all possible mensurations of quantity. If we would term motion and force to be qualities, their determination will be included in the above methods of conjoining in unity; for the motion must be measured as so much extension occupying so much time in passing, and the force as so much intensity of resistance or so much motion produced; all of which have their diversities as above, and may as above be all conjoined and made to appear in an attending agency. There can be no other possible quantities in any quality, and the form as giving definiteness to the matter can not be determined in any other possible manner. We may thus give the *à priori* condition for constructing all possible quality into form, viz.: that the intellect in attention must conjoin the diversity as conditioned by the sensation,—whether as intensive, extensive, or protensive—in unity, plurality, and totality. The concise form of expressing it is—*that the attention must produce the form in all possible quality.*

There are a few *à priori* cognitions involved in what has been here attained, which it may be of importance to notice in this place.

1. Inasmuch as all constructions of form must take place singly, and thus no two forms can be in process of construction together, it follows that an accurate and exact comparative mensuration of quantity can not be effected in attention simply. In pure space I may construct two circles, and in sensation I may have the matter for two rings which I construct into form, but I can not exactly compare the two constructing operations together in either case, and say that the two circles or the two rings are of precisely the same

quantity. In the above cases I may come near to exactness, though precisely how near I can not determine, for I have no capability of constructing the diversity which their difference in quantity contains. In many other cases, the degrees of exactness may be necessarily much wider apart, especially when the contents must be given in different senses, or in the same organ at different times. Thus with the precise difference in the extension of a quantity as seen and as in the touch, or of the degrees of heat or of weight at two different experiences, their comparative quantity must be still less accurately given in attention simply. If I know that the circles, as above, have been constructed by the circumvolution of two lines of the same extent, the judgment at once decides that they must be equal; but a difficulty would here again occur, how shall any attending agency simply be competent to determine the exact equality of the two lines? But, if now I may bring the forms in both cases to one common standard, I may then determine their equality, or the difference between them exactly. Thus if I may apply the same material line as diameter to the two rings successively, or the same index to the two experiences of heat; their comparison in this common application may determine their equality, or amount of inequality. We may thus *à priori* see the necessity for empirical standards of mensuration, and the principles on which we must move to attain them. Their exactness can be made an approximation to the perfection of an intuition, by so much as the mechanical execution and practical application of the common measure can be perfect. It is easy to see how the experiment, if not intuitively perfect, may yet be far more nearly exact than any construction in attention simply.

Thus for the various degrees of intensity in different senses organically, we have photometers, thermometers, barometers, balances, etc.; and for extension in space, rods or chains to determine length, with gallons, bushels and gauging rods to determine capacity; and for duration in time the various chronometers, as dials, hour-glasses, clocks, watches, etc. In no one of these diversities in quantity can any mensuration be absolute, but only 'as a reference comparative with some common standard.

2. It is *a priori* manifest that all quantity may be divisible beyond any possible experience, both in amount, extent, and duration. The intensity may be any amount of all possible degrees at any place and in any time. A given amount of light, or of heat, may thus be diminished in the same place to any assignable degree, and yet the space in extent be still a *plenum*; nor can this be so far carried in any experiment, that it may not be conceived as yet possible to go further in the exhaustion, without at all inducing a *vacuum* in any portion of the space. And as in amount, so also in extent; the diversity in the quality is as the diversity in space, and hence no given diminution may be, which is not also capable of a further diminution. And the same again in duration; the diversity in the duration of the quality is as the diversity in time, and hence no given contraction of a period can be, which may not also be still further contracted. The process of divisibility, thus, in all quantity, is truly infinite. It can not be carried out to a limit which has not yet a limit beyond.

3. While the heterogeneous diversity may come within the operation of distinction, it is only the homogeneous diversity that may come within the operation of conjunc

tion. The heterogeneous in *kind* must be a content for the sensibility in different organs, and the constructing agency can not thus conjoin the diverse kinds in unity. A sound and an odor can not be conjoined in unity so as to give a total, nor either of these with a color. And the heterogeneous in *variety* must be at different times or in different places in the same organ, and therefore incompetent to be conjoined in unity. A distinct bitter and sweet taste, fragrant and fetid odor, or a red and blue color, can not be conjoined in unity. The place or period which both occupy may be conjoined, or there may be a blending of the heterogeneous, as in the rainbow; and the whole, as undistinguished quality, constructed into form. So also, and for similar reasons, the different *orders* of homogeneous diversity can not be constructed in unity. The degrees of intensity may not be conjoined in one form with the points in space, nor with the instants in time; though the same quality may separately admit of a conjunction, in all the orders of homogeneous diversity. A redness or a hardness may have degrees of intensity, figure in extension, and duration in time; but all these must be constructed in separate acts of attention.

SECTION V.

THE CONCLUSIVE DETERMINATION OF THE SENSE IN ITS
SUBJECTIVE IDEA.

FROM an *à priori* position we have now passed in review the whole field of the sense in its ideal possibility. The operation of Conjunction for the construction of pure figure and period in space and time has been completely expounded, and all definite forms which may occupy space and time determined as possible. Other forms for phenomena, than such as may be constructed in space and time, can not be; nor can these be constructed otherwise than through the process of conjunction in unity, plurality, and totality. By an *à priori* anticipation of content in general for the sensibility, the operation of Distinction, for the precise quality of any phenomenon which can be given through sensation, has also been fully exposed, and thereby the possibility of all distinct qualities determined. There can not be other content for phenomena than that given in sensation, and this can not otherwise be discriminated than through the process of distinction in reality, particularity, and peculiarity. By attaining all the *à priori* orders of a homogeneous diversity of which quality is capable, as the intensive, the extensive, and the protensive, and the operation of conjunction in its applicability to them all, we have, moreover, determined the possibility of ordering sensation in all the forms which the matter for phenomena may assume. Quality can have no forms but those of quantity, and these can be only of amount, extent, and duration; nor can these be

otherwise constructed than through the process of conjunction, as before determined in the pure intuition.

In these several *à priori* conclusions is involved the complete idea of all perception of phenomena in its possibility. An empirical intuition is thus possible. Phenomena may be given, as appearance distinct and definite in consciousness, in this manner. A Faculty of Sense may so be, and perceive objects. And if objects are given in space and time, as appearance in consciousness, it must be through this same process now *à priori* determined. The comprehensive *formula* for expressing the Sense in its complete subjective Idea, may in conclusion stand thus—*Sensation must be discriminated in observation, and thereby give distinct quality as the matter—and this distinct quality must be constructed in attention, and thereby give definite quantity as the form—of the phenomenon.*

It is important to note, that as yet we have subjective idea only. There is a complete conception of the sense, and thus a true thought but still a void thought, and no knowledge of the faculty of sense as an actual existence. It is cognition to this degree, that such a faculty is determined *à priori* to be possible in conception—the thought is every way self-consistent and in unity—but as yet it is wholly the creature of the productive imagination. That there is any cause which may give actual being to such a faculty, our complete possession of the idea by no means enables us to affirm. This only is determined—the archetype after which the sense must be molded, if any causation generate such an existing faculty of intelligence. In our subjective imagination, we make it to *seem*, but we have not in our consciousness made it to *appear*.

It may, perhaps, conduce to give greater distinctness, though not more completeness, to this subjective idea of the sense, if we add here *some of the representations made of it by distinguished Philosophical Thinkers*. As the first and lowest form of intellectual action it is important that we apprehend it aright, and so be competent to make the sharp distinctions which separate it from higher faculties, as well as that we may attain an adequate comprehension of it in itself.

The very ingenious representation given by Plato, in the Republic, Book VII., commonly little understood or rather often misunderstood, is worthy of our first notice. In the latter part of Book VI. he has been speaking of *the Good*, which, as supreme and absolute, can not be brought within any forms of representation but can only be affirmed through analogies, and he represents that pure science has the same relation to it, that our knowledge of phenomena in sense has to pure science. The intelligible species has reference to the good, as the sensible species has to the intelligible; and his resemblance of both in their analogy according to the Pythagorean mode, is by the division of a mathematical line. Let a line be divided unequally, and then divide again both these unequal parts in a ratio in each to the original division of the whole; and when these parts, in their proportional divisions, are set over one against the other, the larger in its proportional division may be taken to represent the intelligible, and the smaller in its proportional division the sensible species. The *first* has its own larger division, and this represents pure intellect or reason giving the axioms and *a priori* truths as the foundations of pure science; and it also has its smaller division, which represents the intelli-

gible process, or *dianoetic* part, in a pure geometrical or mathematical demonstration. The *second* has also its larger division, and this represents the generalization which as universal rule is assumed from some broad induction of particular cases; and moreover this has its smaller division, which represents the sensible phenomena themselves as the facts in the induction. We have then the empirical facts given in sense, and which are the mere phenomenal shadows and images of the things themselves—and these bound up in an assumed general law, which can have verification no further than the inductive experience reaches, and is thus as universal law resting upon hypothesis and faith only and not science—to be represented under the divisions of the *smaller* part of the original line: and then we have the successive steps of a mathematical demonstration, and which are pure intuition—and these, held in their axioms and necessary truths of the pure reason, giving rational science—to be represented under the divisions of the *larger* portion of the original line. And now, the inductive science of the former is analogous to the rational science of the latter, in this respect, that the inductive is the mere resemblance of the rational, as the rational is the archetypal emission, or educed paradigm, of the absolute and ineffable Good.

From this, in the beginning of Book VII. Plato proceeds to the representation which is of immediate interest in the present place. For the purpose of showing how far short of true science all attainments of sense must be, he gives his conception of what the sense is in the ingenious representation referred to. A subterraneous Dwelling is adduced with an entrance expanding to the light and giving an opening to the entire cave. The persons within are chained by

the neck so as to be unable to look except upon the wall of the cavern opposite to the opening. A bright light without, far above and behind them, illumines the opposite wall, and a road, over which perpetually passes men bearing statues and vessels and figures of all animated and material nature, lies along without the cave and between the bright light and the entrance. The shadows of all these passing figures projected upon the opposite wall are seen by the dwellers within, and any voices of the world without come to them only as echoes from the cavern wall, and seemingly as the voices of the moving shadows. To them, thus, nothing is true but shadows and echoes. These they regard intently, watching their appearance, and deducing the general laws of their successions and changes.

Should one suddenly be loosed and turned towards the light, he would be wholly confounded, and it would be long before he could comprehend the true position of things, know the realities, and bear the direct splendor of the sunlight in open vision. When this was thoroughly effected, and he should again talk with the chained inmates of the cave, his pure knowledge would be but transcendental ravings for them, inasmuch as to the prisoners of sense the eternal verities *above* sense are but simply as *nonsense*. How sincerely would he pity their conceited empiricism! How willingly would he forego all the encomiums, honors, and rewards which they were lavishing upon any who more acutely observed the passing shadows, discovered a new one, or best remembered how they were wont to succeed each other or appear together! This is an outline of the method in which Plato exhibits the manner of phenomenal appearance, and to which it might be added, that to each

prisoner his own shadow is all that he can make of himself to be objective to his own vision. The qualities of things perpetually occupy the attention, and the sense is forced to absorb its entire functions in attaining the *appearances* of things, while a rational philosophy alone can reach the living and eternally abiding *verities*.

A position for an *à priori* investigation of the sense would be given in this imagined cave of Plato, by supposing the man who had attained to the realities of things in the bright sunlight without, to come and sit down before the vacant back-wall of the cavern, and from the conditional principles of the transmitted light from without, determine how the shadows must there arrange themselves, in any anticipation of an inner content being given.

But a more complete illustration is given in some of the suggested analogies by Coleridge, in which, for the wall of the cave, we substitute a broad mirror. There will be the resemblance of whatever comes before the mirror, to the eye placed in a proper position; and so far as the mirror reveals the appearance, it can only be the resemblance of the thing and not the thing itself. The eye, thus, is to the mirror, as the intellect to the sensibility. The mirror has its own pure space, as primitive intuition; but that space is subjective to the mirror, and of no significancy to the thing itself which may give its resemblance within it. Some content must be given to the mirror, or no resemblance can appear; nor can this appearance be the thing itself, but only a phenomenal envisagement of it. The eye can by no means see itself, but only its resemblance. A faculty for perceiving the thing, and not merely its resemblance, would demand the capacity to receive and construct the content into form, other than

within the illuminated space of the mirror; or, that the mirror should become transparent, and the thing apprehended directly through it.

As analogy for the *subjective* idea of the sense, the mirror only is conceived, and its content taken as anticipation in general; and then, from the conditioning principles of all reflection and representation of images, an *à priori* determination is made, of how the resemblances of things in a mirror is possible. This will give the complete thought of how any resemblance of things may be, but this can be only an imaginary *seeming* for the subject thinking, and not any *appearance* either for himself or others.

The method of Kant is to give the functions of the sense, not by any illustration, but in a direct statement of the process of perception. With his terminology fully understood, there is no further difficulty in attaining his meaning than what is necessarily incidental to so abstruse a subject. With him the sense is solely the faculty of envisagement, or of representing things themselves in their phenomenal appearances. The intellectual operations of discriminating and constructing, he refers to the work of the understanding; and thus excludes from the functions of the sense, that which gives distinctness and definiteness of figure to the phenomenon. The sense is the illuminated wall of the cave, or the reflecting surface of the mirror; but the chained prisoner, or the fixed eye before the mirror, is the conjoining agent, not as in the field of the sense but in the field of the understanding, and this operation of conjunction is not at all distinguished from an operation of connection, which we shall hereafter see is the alone proper work of the understanding.

With this functional instrumentality for envisaging, which the organism of sense supplies, the process of perception, as a work to be accomplished, then goes on in the understanding; and it is simply *his* method of describing the operation of conjunction, which we have already given after *our* manner of investigation. The conjunction of the content in sense gives to it unity; and that there may be this unity in the product, it is necessary that there be a higher unity in the understanding agency producing it. This unity in the product, he terms "Synthetic Unity," or, inasmuch as it is one member in his category of quantity, sometimes he calls it the "Categorical Unity." The higher unity in the understanding, inasmuch as it gives the unity to all quality as product, is termed "Qualitative Unity." In this higher unity lies the capacity to accompany all representations, so that each may, to the mind, be *its* representation and thus all be in one consciousness. This accompanying and uniting all representations in one consciousness, and which yet can not itself be represented in any appearance, he calls technically the "*I think*;" and there is thus the same "I think" for every representation, and which holds all in its own original unity. This he terms "*the original unity of apperception*." Except for this original unity of apperception, every representation would have its own separate "I think;" and therefore, as he says, "I should have as many colored different a self as I have representations of which I am conscious." This bringing of all representations under the one "I think," is the highest principle of all cognition, and the faculty in virtue of which we are competent to unite the diverse in one, and, therefore, as in one consciousness, make each representation to be an ob.

ject as *my* object. "It is the highest point to which we must attach all use of the understanding; in fact this is the understanding itself."

We will refer here but to one other explanation of the function which brings phenomena into distinct consciousness, and thus would render the perceptions of the sense intelligible, and that is the method given by Descartes.

His whole theory is contained in the germ which has its concise expression in the noted formula "*Cogito ergo sum.*" This has been interpreted in two ways, having their meaning and use very distinct from each other. One makes it to be a *logical proof* of the reality of my existence. It is an ontological syllogism, and concludes in the demonstration of real being. Now, in this method of interpretation, and which has been the most commonly made, it has really no interest in, nor connection with, any inquiry after the functions of the sense. Its sole use is to prove the real being of myself. But it may be proper, here, to say that in any such application, it can be nothing other than an empty sophism. It covers an absurdity, and has thus no logical force except in its delusion. If we postulate "*the thinking*," and would thence deduce the *I* as existing self, the conclusion is a *non sequitur*, inasmuch as the fact of a phenomenon of thinking does not give the existence of the subject which thinks. And if we say "*I think*," meaning—*myself* to exist thinking—the whole is a *petitio principii*; inasmuch as the existence of the *I* who thinks is the very thing to be proved.

But another interpretation brings it directly within our present use, as explanatory of the *process for attaining* to distinct consciousness. The "*Cogito*," in this meaning, simply involves the process by which I come to know my-

self, or to awake in self-consciousness. By the act of thinking I come into a state of self-consciousness. I think—meaning thereby that I perform the intellectual operation of conjunction already *à priori* given, *i. e.*, I attend—and thereby construct definite objects in consciousness; and such subjective operation, giving such objective phenomenon, determines a distinction of my object from myself as subject. By thinking, I find myself. *Cogito, ergo sum*, not as process of logical demonstration that I exist, but as practical process of coming into self-consciousness. A letter from Descartes himself to Gassendi would seem to fix this last meaning, as that which the author intended. “The very moment there are phenomena of any kind within our consciousness, that moment the mind becomes cognizant of its own existence; and that were there no consciousness, there would be no possible evidence of the existence of an intelligent principle. The scientific form of this truth was meant to be presented in the sentence, *Cogito, ergo sum*.”

Here, then, we conclude our first Chapter in the Sense, embracing the two divisions of the pure and the empirical Intuition. We have a completed Idea of how a faculty of sense for perceiving phenomena in consciousness may be. The whole is a *seeming* in the Imagination, and not an *appearing* in Consciousness; and is thus subjective only. Yet is the completed thought no fanciful and arbitrary combination of conceptions, but attained altogether through conditions necessary and universal. While we know that the product is ideal only, we know also that so the real is possible; and if at all actual, that so it must be.

It yet remains to find this whole process of the sense, as now *à priori* determined in its subjective idea, in actual

being and operation. The facts must be gathered, in which we can ascertain a Law of perception as binding them up within itself, and expounding their being and combination. And when such law, as objective in the facts, is determined to be in full accordance and correlation with the subjective idea, we shall have answered the claims of a criterion of science, and may of right take possession of the whole field of the sense in the name of philosophy. This will now be the business for our *Second Chapter of the Sense*.

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CHAPTER II.

THE SENSE IN ITS OBJECTIVE LAW.

SECTION I.

TRANSCENDENTAL SCIENCE IS CONDITIONED UPON A LAW IN
THE FACTS CONFORMED TO AN *A PRIORI* IDEA.

AN arbitrary conjunction of diverse particulars, or such particulars thrown together at random, would give a combination that could have no consistency or significance; but when constructed according to the determination of some *a priori* conception, the whole will have an intelligent systematic unity and be a significant and self-consistent product. This conjunction may be made purely in the productive imagination and the product be only ideal, yet will the pure thought have its intelligible meaning. Thus a random aggregation of all the elementary conceptions which should go to the composition of a steam-engine would have no signification, yet when combined according to the determining principle of such machinery, the whole would be a self-consistent thought, and contain in its unity the complete Idea of the steam-engine. It would give the science of what is possible to be when the conditions are supplied.

But a science of the actual can be attained only in the facts themselves. The consistent thought can not determine

that the actual thing shall be. There must for this be both the materials and the maker. If the materials can not be found the consistent thought can have no expression, and if the materials are given they can not constitute the thing until intelligently put together by the maker. The ideal steam-engine is but a *void thought*; the materials for a steam-engine are yet *void of thought*; the materials put together by thought become an *intelligible thing*; and the void thought, as Idea, carried through and conforming to the thought, as the Law, in the thing becomes *science*.

But science is still of two distinct kinds. All science has the correlation of Idea and Law, but the idea may itself be an empirical fact or an *a priori* principle, and the science is to be distinguished in kind accordingly. If the Idea is still indeterminate, there is no science and at the best only mere opinion: If the Idea is but a fact found from experiment, there is empirical or Inductive Science; but if the Idea is an *a priori* truth and thus a principle in its own light necessary and universal, there is then Science of the highest kind, viz., rational or transcendental science.

Examples illustrative of the above positions may be given for the science of planetary systems. The hypothesis may be taken that the planets were originally component portions of the sun, and that they have been stricken off successively from the surface of the molten mass by the impinging of comets upon it in their perihelion passage. But as such hypothesis can not be determined as fact, there can be no determined accordance of Idea and Law, and therefore no science. It is a mere guess, or at the best a more or less probable opinion.

But when the grand thought was attained by the genius

of Newton that perhaps all matter gravitates toward all other matter, and a broad induction found the facts conformable, and that the ratio was directly as the quantity of matter and inversely as the squares of the distances, then was there a science of planetary systems in the complete conformity of idea and law. The one thought simple as truth, universal as matter, convincing as light, could then be applied to reconcile all paradoxes, expound all anomalies, and combine in harmony the facts of all past and future observation. Further discoverers may work on under this law through coming generations, but the whole pathway was determined and the science comprehended in the thought of Newton.

But genuine as is this science of the planetary worlds it is *inductive* science only. It has assumed that there is a uniformity through nature, and from a broad though still partial induction it has deduced the universal fact of gravitation and its ratios, and should it be admitted that the deduction is valid and the fact of gravitation correctly attained for the whole universe of matter, yet would that fact be still inexplicable, and stand out as a mere arbitrary making with no rational principle to expound why it was thus and not otherwise. The fact being thus, planetary systems must be thus, but so long as the fact has no expository principle, nature itself has no rational interpretation, and we have a science of nature only in a Law which is to us wholly destitute of all reason.

But suppose the practicability of attaining, in the necessary conception of force itself, the *a priori* Idea of gravitation just as the Maker of the universe had it in the morning of creation, and that if matter exist at all it must be in a

force which shall have just such ratios and work out just such universal relations, and then we shall have a science whose highest law is no fact, or thing made, but a necessary principle determining in its own light the whole making. Such a stand-point would transcend all experiment, and determine in the necessary Idea what the Universal law must be, and would thus give a *transcendental* science. Such a stand-point and thus such an *à priori* science there certainly is, so sure as the universe is rationally and not arbitrarily made; and its attainment by the human mind is not hopelessly impracticable. But whether this be attainable or not in the human science of planetary systems, such *à priori* Idea for all possible functions of a Sense, which may give its phenomena distinct in quality and definite in quantity, has been now already found.

This, it is true, is as yet given only in Idea, and is a systematic thought only in the mind's own apprehension of it, but the labor in attaining it has by no means been thrown away. It determines for us a position relative to all facts of perception in sense, as would an *à priori* idea of gravitation as above, determine our standing in reference to all the distinctive facts of planetary systems. It enables us to say what the law must be as conditional that the facts may be, and therefore in finding the facts which have their actual law correlative to such idea, it enables us to give an every way rational exposition of our knowledge of such facts, and which is more than an inductive, even an *à priori* demonstrated science. Without such a rational investigation of the functions of sense it might certainly be very long ere we should attain to an inductive science of perception. The phenomena given in sense might indefinitely in the future as

already in the past be observed and classified under fanciful or arbitrary forms of arrangement, without laying hold upon any systematic thought which should bind up the facts in any scientific arrangement. But now such attained Idea gives at once a determined universal Law.

And here, the remaining task in this First Part of our undertaking is, *to find the Law in the facts of the sense which shall be correlative with our attained à priori Idea.* We will proceed with this *à priori* Idea as we should in an Inductive process with any hypothesis, and for the present use it only as our guide to go out through the phenomena of the senses and thus intelligently to question nature. And this we will do in two ways as the modified forms of substantially the same method, and yet tending thereby the more completely to establish the conviction of the conclusiveness of the induction. In one way we will take the Idea and gather the facts as they readily admit of being bound up together by it, and which we will term *The Colligation of Facts*. In the other we shall take apparently quite distant and disconnected facts, and yet see them unexpectedly leaping within the Idea as their Law, and which we will term *The Consilience of Facts*. We shall thus fully find that our attained Idea of the possible is the correlative to the manifest Law of the actual.

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SECTION II.

THE COLLIGATION OF FACTS.

WHEN any self-consistent idea, at first hypothetically assumed, may be so applied to many different facts as to bring them all in unity within its circumscription, and bind them within itself that they may thereby belong to one organized system, each portion of which may be adequately expounded as determined in its place by this applied idea, we have then an instance of what is termed a Colligation of Facts. In such a result we no longer hold our applied idea to be hypothesis, but affirm that the facts themselves must possess within them a formative principle, which has controlled in their production and is the complete correlate to this idea which we have applied to them and that has collected and expounded them so completely; and that, therefore, there is within them an actual law, the exact counterpart of our applied idea. We now proceed in this way with our *à priori* attained idea of the sense, to apply it to various facts in the process of perception as actually occurring in experience, and in proportion as we find it to hold these facts in colligation, and thus expound their peculiarities, shall we be competent to affirm that we have found the law which must inherently have regulated their formation, and which thus really exists as embodied within them. This law thus found, as the exact correlate of the idea, enables us completely to explain our knowledge of the appearances in the facts, and thus becomes properly a *science* of the facts.

We do not now insist upon the necessity and universality of the idea, as having been attained through an *a priori* process, but are willing to use it for the present as mere hypothesis for interrogating experience, and ascertaining how completely it may collect the facts within itself. If it be found to possess the power of such colligation, it would, as mere hypothesis, be then verified and give to us a science as valid as any induction could afford; but we may then bring out its *a priori* characteristics of necessity and universality, and thereby give to the science a much higher foundation than in simple induction, viz., that of a transcendental demonstration.

The idea, therefore, which we now adopt as hypothesis is, that all the facts in the process of perception must stand within the law which demands the *intellectual operations of Distinction of quality and Conjunction of quantity*; and consequently that where this law is complied with in its demands, there is clear perception. The process of application might be to take any facts in the perceiving of phenomena, promiscuously as they might come to hand, and dispose of them within the circumscription of our hypothesis as the facts themselves might permit; but the more philosophical and satisfactory course must be to order our induction of facts under separate heads, and see how completely the hypothesis binds up all the varieties of facts under the different captions. We shall make the induction sufficiently comprehensive to be a safe ground for deducing a real law and not a mere casual coincidence, but yet with no attempt to exhaust the facts; other minds may pursue the same process to an indefinite extent, as far as any facts which an experience in sense may furnish.

1. *Facts connected with obscure perception.*—A great variety of facts may be attained connected with some obscurity in the perceptions of the sense, and which have led to popular methods of accounting for the obscurity on a great variety of grounds, but when carefully examined they will all stand within the circumscription of our hypothesis, as the highest and most comprehensive reason which can be given, viz., that either the operation of Distinction in quality or that of Conjunction in quantity could not be accurately and completely effected. Sometimes it may be said that the sensibility of the organ is impaired; or that the medium through which the content is given, as the light, or air, etc., is defective; or that the object is too minute, too far in the distance, too much confused amid other things, or glancing upon the sensibility too transiently; or that the mind was too intently engrossed with some other occupation; but all these and other popular reasons for the obscurity will at last resolve themselves into this—the intellect did not exactly distinguish, or did not completely construct them. It might be easy to arrange our facts under the separate heads, so that the obscurity from indistinctness and that from indefiniteness might hold each their own facts, but such subdivision is not necessary. The example will in each case give immediate opportunity for deciding to which, or whether perhaps to both, it belongs.

When the eye rests upon some landscape replete with diffused and diversified lights and shades and colors, we are conscious of a very inadequate perception of its different objects until the eye has roved over the scene repeatedly and deliberately, and as this process goes on the perception comes out with more and more distinctness of the colors,

and more and more definiteness of the figures, there presented, and the obscurity of the first look passes into clear perception. So, still more, when we first enter the thronged street of some strange city, from which new and unaccustomed sensations are very confusedly given in the thousand moving colors and forms of men and animals and carriages, and the blended sound of feet and wheels and jarring wares and percussion of tools and human voices perhaps of different languages, is it impracticable at once to perceive all, or perhaps even any one appearance completely. Again, we cast our eye upon the printed page of a book, and especially the more to our purpose if the characters belong to an unknown language, and with these multiplied and blended sensations of lines and angles and curves and points, the letters can not at once stand forth as clear perception in consciousness. Or, only once more as an example, when the strains of distant music from many voices and instruments strike upon the ear, and the complicated and modified harmony is so obscure, that we can not catch the tune which combines all these tones in unison, the whole is but a rhapsody of diverse noises in which nothing distinct and nothing defined is perceived. In all these, it is at once manifest that the operations of both distinction and conjunction are incomplete, and that the obscurity is removed in proportion as these operations are effected by the intellectual agency, nor can any thing else secure a clear perception.

There may be noticed also such facts as the following: A blending of the quality so effectually that though many peculiar varieties may be known to be there, yet can no one be distinguished exactly, not even by deliberate trial of the intellectual agency. We are conscious of the appearance of

the peculiar colors in the rainbow, yet can we neither discriminate nor construct them precisely, and hence they must remain confused and obscure in our perception, though it be easy to distinguish the whole bow from the surrounding cloud and to conjoin it in a definite figure. So we may take into our mouth food or drink compounded of various ingredients, and while we may be conscious of several peculiar tastes, yet may we not by the greatest care distinctly separate them, nor completely conjoin them so as to give the amount and proportions of any.

And then, at other times, not from the confused blending in the sensibility, but from the impracticability of attaining a complete outline, we have obscurity of perception. Thus the letters on a distant sign-board, or on the stern of some departing ship, or the wheel-house of a steamboat passing at a distance, may be wholly illegible though the colors as quality may be very distinctly apprehended. An object, also, at the bottom of some clear lake or stream, when the surface is gently ruffled by a breeze or the undulations of the current, may be completely given in the sensation, and the quality distinctly apprehended, and yet it may be utterly impossible that the form should be definitely perceived. So, again, when the content is given to the eye through the medium of glass or crystal, which though transparent is so curdled and the substance interfused with waving lines that the sensation is interrupted and distorted, the quality may be very well discriminated and distinctly perceived, and yet no function of the sense may be able to give definite outline and figure to the object.

And certainly all these facts come within our applied idea. Precisely where we can not discriminate, there we

can not have distinct quality; and where we can not construct, there we can not have definite quantity; and when either the content or the form is imperfectly given, there is at once obscure perception, but which passes to a clear perception immediately upon the completion of the operations of Distinction and Conjunction. The law for the process of an actual perception is here abundantly realized. An exclusion made of the law from the process the negation of perception follows, and to just the amount of the exclusion; and the control of the law admitted, there is at once a distinct and defined perception of the object. The hypothesis as ideal, finds its counterpart here embodied as a reality.

We may much enlarge our induction, by taking such facts as are given when only a broken and incomplete content in sensation is effected. The portrait of some person may have a portion of the coloring or delineation of features faded or defaced by age or exposure, and the observer finds it wholly impracticable to perceive what peculiar face and expression of countenance the original picture represented. The intellect is incompetent to discriminate and construct from the sensation a complete image. But an old friend and former companion of the person represented may stand before the portrait, and the few faint lines and touches which remain are sufficient to awaken long-gone conceptions and to quicken familiar recollections, and at once the features of his friend are there, glowing vividly upon the canvas as the painter originally gave them, and he dwells upon the picture with deep and saddened interest. The well-remembered countenance of the original avails to the intellectual re-construction of the effaced lineaments of the

painting, and what to other eyes it were impossible to find he perceives distinct and well defined, because his own agency has brought out anew the faded colors and obscured lines of the picture, and in the restored portrait the likeness of his friend has found a perfect resurrection.

Again, some old manuscript, or an engraving on a monument, or an ancient coin may be taken, some portions of which may have become so obliterated as to be utterly unintelligible to ordinary readers. The sensation is too incomplete for the intellectual agency to make out the construction, and if no help be otherwise afforded for restoring the defaced portion there must unavoidably remain a perpetual hiatus in the record. But if long habit in deciphering obscured inscriptions, or an acquaintance from other sources of the facts designed to be here recorded, help the intellectual agency along the lost lines that it may fill up the chasm through its faintest tracings, the whole is to that mind again restored and he reads again aright the old record. To a practiced antiquary, even the slightest remnant of the old chisel-marks on the monument, or the touches of the pen upon the parchment, are sufficient for filling up what must otherwise have been unavoidably wide gaps in the inscription. Champollion could read the much effaced Hieroglyphic upon a Theban tomb or column; and Belzoni, the faint traces on an Egyptian papyrus or mummy covering, when to an unpracticed eye the whole was faded beyond recovery. The intellect, indeed, fills up a chasm which was merely a void in the sensation, and by re-constructing restores again the original, guided by the content which is given; and is an agency very similar to that which, from long study in comparative anatomy, enabled Cuvier to

restore a complete antediluvian animal, whose entire species has long since been extinct, from a solitary fossil bone as the only remnant of the skeleton.

Obscure perceptions, presenting what facts soever, will invariably be found to originate in an incompetency to distinguish quality when the obscurity relates to the content, or an incapacity to conjoin the quantity when the obscurity relates to the form of the phenomenon. The intellectual agency can not go out under the guidance of its conditional law, and therefore the product of a clear perception can not be; but so soon as the distinguishing and conjoining agency may be carried into complete execution, all obscurity of perception is effectually avoided. Thus far in our induction, our hypothesis collects all the facts and binds them up in systematic order, and determines for us that the law actually embodied in the facts of perception is the exact correlative of the hypothetical idea which we have been applying to them.

But we may pursue our induction further, under another division of facts connected with perception and examine,

2. *The relative capabilities of the different organs of sense.*—Different organs of sense give their diverse sensations as content for different kinds of quality, and each in its own manner and degree as capable of the operations of distinction and conjunction to be applied to it. The eye receives its content for colors, and the ear for sounds, etc., and these may be discriminated and constructed according as the peculiarity of the sensation in the organ may capacitate for it. It is not designed under this division to notice the intellectual agency in distinction so much as in conjunc-

tion, as our object must rather be here to attain facts which reveal their law for form, than for peculiarity of the content. If, then, we find the facts to be arranged under our hypothetical idea, so that the capability of perceiving form or quantity through the sensation in any particular organ, is precisely as that organ is adapted for conforming its functions in sensation to the demand of our hypothesis as conditional for an intellectual construction of the quantity, we shall in a deeply interesting manner enlarge our induction of facts, whose actual law is the correlative of our hypothetical idea. This will require us to find the facts thus to be, that the organ which from its functions gives the highest capabilities for the passing of the intellectual agency in attention over the content in sensation, and constructing it according to the operation of conjunction, shall also be capable of attaining to the clearest and most complete perception of the forms of its phenomena, whether of figure in space, period in time, or amount of intensity in the sensibility. For the purpose of thus questioning the facts in experience on this topic, let it be recollected that extension in space has three dimensions, length, breadth, and thickness; that prolongation in time has but one measure, as in the flowing along through a series; and that intensity in amount has also but one measure, as in the line of a continually augmenting sum of degrees; and we shall be prepared to go out and gather the facts which we may find under this division.

We will first look at the relative capabilities of our organs of sense for securing the perception of forms, as extension in Space. The Eye, as the organ of vision, is the most complicated, and as the result the most completely adapted

organization, for securing the construction and thereby the perception of extension in the figures of phenomena. The intellect is best capacitated through its sensation to attain the most complete perceptions of the shapes and relative positions of objects in space. In order to use the facts which should be gathered in this induction it is necessary that we take a cursory glance at the material structure of the eye. A bare reference is sufficient for those who have some understanding of its internal structure and conformation, without any minute descriptions and explanations. The entire organ of the eye, including its component elements of humors aqueous and vitreous, its lens, its pupil dilating and contracting in proportion to the amount of light transmitted, its expanded nervous membrane as the retina, with the large optic nerve passing out on the back side thereof to the brain, its complicated apparatus of muscles for moving the entire ball of the eye or fixing it steady in one position, and its lid for lubrication, cleansing and protection, is altogether most skillfully adapted to the ends designed. The light is admitted and the rays diffused over a most sensitive surface within, and forming the images there as on a canvas for the use of the intellectual agent. The sensation is therefore conditioned by the rays of light, transmitted by reflection from the external object, which give their content for the phenomena in perception.

In this arrangement of the organ, the whole content conditions itself both in position and outline to the place occupied upon the retina, and the sensation is modified accordingly. The whole field of the sensation is spread out in order, and the constructing agency in attention may spontaneously move over the entire outlines given, and bring the

forms of every part within the light of consciousness. The content is itself topical in the sensibility and the affection as sensation conforms to it, and this conditions the constructing agency accordingly, and thereby the phenomena are determined in their particular and relative forms of appearance.

Moreover, there is this further important fact, that in one point of the retina there is a spot of higher sensibility than any other portion. A small point as a center has this acute sensibility, and from which on all sides the sensibility diminishes. This has been called by physiologists *the sensible spot*,* and is of peculiar significance in our present induction. The muscles of the eye make it competent in its own motion to bring any portion at a time, and all portions successively, of the content upon this sensible spot for a more delicate and complete sensation. When the occasion requires that the intellectual agency should make a more nice construction, there will be spontaneously the muscular movement for bringing the more delicate outlines of the content upon this susceptible point in the retina, and revolving it there until the most minute forms have been accurately conjoined. It is this work which gives to the eye that peculiar searching motion, readily observed in another, and consciously noted in our own experience when the mind would attain some perception very critically and exactly. When the attempt is made to give to any object a very close and thorough inspection, the person may be made quite conscious of an uneasy and disquieted feeling until his eye is fixed in

* Phil. Trans. 1823. Motions of the Eye. Bell's Bridgewater Treatise. Also, Whewell's Phil. of Inductive Science, Vol. I., p. 119.—Perception of Space.

the right position toward the object, and the attending agency can move the most accurately and completely over the content as this is made to revolve upon the sensible spot, and in this way bring the form into clearer and sharper outline in consciousness. All that the motion of the eye, and the turning of the head to favor it, may take within the sensibility of the organ itself, and which in succession may be the whole hemisphere, can in this manner be successively brought to revolve upon this sensitive portion of the retina for its more exact construction in a perception, and the completeness of the form will be proportioned to the exactness of such a construction. All these facts in the capacity of the eye as organ for perceiving figure come remarkably within the circumscription of our ideal hypothesis, and manifest that their actual law is in entire correlation with it.

But we may extend our induction to the facts given in the capabilities of the Touch for perceiving form in extension. The organization here is not so nice and complicated in its arrangements as in that of vision, but to the whole amount of its capacity for giving sensation which may be conjoined into form, the facts come completely within the same hypothesis, and evince for themselves the same actual law. The fingers—and by use other parts of the body may be made to subserve the same ends—are the organs of sensibility in which are given the sensations of touch. The ends of the fingers have their delicate nervous expansion and which also have their connection with the central sensorium in the brain by as complete a medium as the optic nerve, though a more extended communication than that. When these are brought in contact with any resisting object, a content is at once given in the sensation, and they

become as the sensible spot in the eye, and condition the attending agency in the same manner. The content must be given to the organ through its contact with the outward resistance, and that the form as figure in space may be perceived, the fingers must pass over this resisting object as the content in the eye was made to revolve upon the sensible spot in the retina, and thereby the conjoining operation is effected and the form is completed in the attention. We do not here, however, find an expanded field of the sensibility for receiving topically the content for many phenomena at a time, as in vision. The broad landscape, the wide expanse of the distant heavens, with all their complicated outlines, are not within the capacity of this organ of sensibility. One by one, and within quite a limited range, must the objects gained by the touch be perceived, and thus in comparatively a narrow field alone is the operation of construction at any one time carried on. But within these limits the perception of figure and position by the touch are very accurate. When we have constructed the form through the sensation in the eye, almost instinctively do we reach forth the fingers to attain the content in a new sensation, and subject the same to a new construction. Especially if the object be small, and near at hand, the intellect rejoices in the diversified manner of construction, and the confirmation of perception by two operations. The touch adds its own definiteness to the shape as it appeared in vision. Though not over so broad a field, yet within its own scope, the sense of touch may give form in space as accurately as the sense of sight. From the habitual exercise and cultivation of the sense of touch, the blind attain to a surprising accuracy of perception thereby. They follow out raised letters with their fin-

gers, and read with almost the facility that is given to others by the use of their eyes; and they have been able to trace the lines in sensation, such as those, say, in nicely joined cabinet work, where all perception of the eye completely failed.

We will extend the induction to the facts found in other organs of sense, and inasmuch as we shall find no capacity to perceive figure by them, so we shall find that they give no content in a manner that the intellect can conjoin its diversity, as *extensive*, in unity. The operation of conjunction can not be, and therefore shapes can not by them be perceived.

The organs of Hearing are on opposite sides of the head, and thus quite favorable for giving the content in such a manner that it may be determined from what *direction* the sound has come. The ear which has received content in the greatest intensity will of course be an occasion for deciding that the sound has come from that side. The modifications in intensity through different experiences may afford the ground for some vague estimate of the *distance* from the center whence the undulations have proceeded. All such construction is necessarily comparative, and therefore quite imperfect, and yet complete precisely in proportion to the capacity of the organ to furnish the content in such a manner that it may be brought within an attending agency. But this vague estimate of direction and distance is all that can be secured of form in space by the organ of hearing. All conjoining into figure, and giving a determined shape and outline of object by the ear is impracticable. The sensation is not so spread out on any field, nor can the organ, so go over it in contact, that the intellect may conjoin it

into shape, and give form to the phenomenon. The organization may sometimes have its modifications in an elongation or expansion of the external portion of the ear, as in the horse or the hare, and very probably also a nicer construction and conformation of the inner ear may be given to some animals than to others. The intensity of sound may be thereby augmented, and direction and distance be more accurately apprehended. Such expansion of the outer ear and its easy movement in all directions subserves precisely the same end as the artificial ear-trumpet for the deaf, by which a greater volume of content is brought within the sensibility. But this avails nothing toward such a presentation of the content that an operation of conjunction may be effected, by which outlines may be constructed, and thereby figures in space perceived.

The organ of Smell is also in many of its facts very similar. The aroma may come into the sensibility in larger amount, and thus with more intense sensation when the organ is in a given position, and thereby direction and distance may be vaguely estimated as the point from whence the effluvia have come. But nothing is here capacitated for giving the perception of shapes to odors. The organ may be more or less perfected in its conformation, and thereby a more intense sensation may be given, as in the dog or the vulture, and in this way distance and direction be more accurately apprehended, but no perfection of organization can in this way give the capacity of perceiving figure in space by the smell, inasmuch as there is no adaptation to the conditions demanded for the necessary intellectual construction.

The facts in the sense of Taste should also be put in the

induction. From this organization there is not capacity for perceiving even position in space. The sensation is conditioned to the savory object coming in contact with the organ and being chemically dissolved upon it, and thus the sense of touch is to be wholly excluded. The quality discriminated may have form as amount, as prolonged, but not as extended. Not even position, and much less figure in space, can be perceived in any sapidity. There is nothing of the homogeneous diverse, as extensive, given in the content, and consequently nothing which may be conjoined into shape.

Thus, then, with all our organs of sense; the facts are held in colligation by our ideal hypothesis, and in all cases evince this actual law, that the capacity to perceive form as extension in space is found in the actual operation of conjunction, and where that can not be effected, there it is impracticable that any figure should be perceived.

We will further bring within our induction under this division, the facts connected with the capacity of the sense for perceiving phenomena in the forms of prolonged Time. The operation of conjunction is, in the protensive, in one measure only, and constructs period in the flowing series of successions. All sensation in any organ of sensibility is, as discriminated quality, a conscious affecting of my inner state, and thereby giving the homogeneous diversity as protensive in time. As the affection goes on in the continuance of the quality, or the perpetual alteration of qualities, the diverse instants admit of a conjoining operation which constructs them into definite periods, and the qualities are thus given as phenomena in their forms of time. One kind, or one variety of quality, is as much as another readily subjected to this operation of conjunction which constructs its form in

time. No one organ has a different capacity in respect to forms in time from another.

Thus, take any color as quality in vision. Its topical arrangement on the retina, as the field of sensation, gives peculiar capacity for constructing its figure in space, especially in the capability for revolving the sensation in the whole field over the sensible spot, as before considered. But such facility for the operation of conjunction in extension avails nothing for conjunction in prolongation. The bare sensation in any organ may give diverse instants in the affecting of the inner state as completely as when the sensation is spread out topically upon an expanded field of the sensibility. I may thus as readily construct the period of a sound, an odor, or a taste, as a color or all the colors definitely arranged in a landscape. All sensation in any organ induces modified affections of the internal state, and thereby as inner sense come within time, and may thus fill the forms of time through a definite construction of them, and be perceived as phenomena having their exact periods; and no sensation, in this capacity, for conjunction in the form of time, has any advantage above another, nor in point of fact do we perceive the period of the quality in one organ, more readily nor more perfectly than in another.

We induce also the facts connected with the perception of Intensity in sensation. And here, again, manifestly the facts are that I can perceive degrees in the amount of the quality, as well when given in one organ of the sense as in another. The organ of vision or of touch has capacity for an intellectual constructing of figure in space, when all other organs are destitute of all that can capacitate for such an operation; but this does not give capacity for an intellec-

tual construction of the degree in intensity, or amount, for the sensation in the eye or the touch any more readily or completely than for the sensation in the smell or the taste. I can as well perceive how much sweet or bitter there is in intensity, as I can how much redness, or hardness there is. And this fact manifestly comes within our hypothesis, inasmuch as all construction of intensity, or amount, must be of one measure in all quality, simply as a conjunction of degrees from void sensation up to the given intensity, and this as truly for quality in taste as for quality in vision. One organ has no prerogative over another, but each equally gives its content over to the attending agency, that the limits of its amount may be constructed for, and thus be brought within, the light of consciousness.

Here, then, we have a very broad field of most interesting facts, all held in complete colligation by our ideal hypothesis. In all operations of conjunction the form is given in perception precisely proportioned to the capacity of the organ for giving the diverse sensation to the intellect that it may be so conjoined in unity. The organs of vision and touch give figure in space, and they alone, inasmuch as no other organ gives the diverse in extension as content in the sensation. But all organs alike give phenomena in the forms of time and amount, because they all alike have the diverse instants of duration, and diverse degrees of intensity, in their own sensation as content, and which, in each, the intellect may alike construct within their respective limits. The ideal hypothesis and the actual law in all these facts are manifestly correlatives. The original conformation of our whole organization of the sense must have had its regulation in such an idea as its archetype. And in this

we may see the beauty and the truth of Plato's representations, so little understood, so often by an empirical perversion misunderstood and then derided as a visionary fancy, viz., that the idea in the absolute reason—the *Divine Idea*—has been breathed into shapeless matter, and thus that which had otherwise been wholly amorphous and formless has put on order and beauty; and this idea, as if it were an infused soul, has given vitality and unity. With all the wonderful elements in the organs of the sense, how manifestly as inert and useless to all the ends of perception as the dust into which they ultimately crumble must they have been, had not their Almighty Maker put this original idea into them, as their upholding and informing law of combination and functional operation.

There is still another division, including many interesting facts, which it is important should be brought within the induction which we are now making, and which may be given as—

3. *Deceptive appearances.*—There are many facts connected with deceptive appearances in the sense, and delusive phenomena as perceived, which are held in colligation by this same ideal hypothesis, and which must therefore have their actual law as its correlative, and which we will now proceed to bring within our induction. In this division the facts are rather connected with the operation of conjoining into form, than distinguishing the content, and yet so far as they have any connection with the quality perceived, they will confirm the conditions of the operation of distinction for all perception of distinct qualities. There is, in these facts, an operation of conjunction effected, and thus form appears; but because the operation has been other

than the conditions of the content demanded, the form deceptively appears, and thus the perception is partially or wholly an illusion. The facts are not of obscure, but of false perceptions. A distorted medium, or a partial sensation, may condition the construction of the form that it shall be quite a false appearance. The ring of Saturn may appear as two handles upon the opposite sides of the planet, from the conditions in which the content is given in the sensibility. The agency in attention may thus be led astray by some imperfection in the condition of the sensation.

Thus, when in vision the content is received through a dense fog, or perhaps in the twilight, there may often be, not an indefinite appearance merely, but quite a deceptive and false perception. The content has not been spread upon the field of the sensibility with any sharpness of outline, and can not, even when carefully revolved upon the sensible spot, give any exact conditions for the constructing agency, and the operation of conjunction is thus left very much to some scheme of the imagination. The habits, temperament, sympathies, and emotions of the person may thus very much modify the shapes which the matter in sensation shall assume in their appearance, and may be of beautiful, or monstrous, or grotesque and ludicrous illusions. The old story of the gay young lady and the superstitious curate, viewing the moon in company through a telescope, is quite in point. "Those two shadows," says the lady, "which stand side by side together are surely two happy lovers in affectionate conversation." "Ah! I see," says the curate, "two lovers! not at all; they are the two steeples of a grand Cathedral." Personal experience and frequent observation may gather an indefinite number of effects of the same description,

where the sensation has been constructed very deceptively through the influence of the imagination in its hopes or its fears.

So with the facts connected with tricks of legerdemain, or sleight-of-hand, which are often of so marvelous a description. The arrangement of surrounding objects, the lights and shades, manifestations and concealments, together with the attitudes and motions of the conjurer are so artfully contrived and skillfully managed that the attending agency of the spectator is induced to move in a certain designed direction, and thereby to construct the intended forms, and which thus appear in the consciousness as veritable phenomena. From the sensation as partially given, the productive imagination is induced to construct such forms as may seem to fill up the chasms in the content, and all this so readily and unsuspectingly that the completed product in appearance is taken to be entire reality, and the cunning delusion becomes the supposed perception of the most surprising occurrences, and the deceptive wonders are related abroad as the facts of eye-witnesses. When, through feints and artful management, the intellectual agency is induced to construct such products as the operator intended, while the actual content in the sense as given is not discriminated from that which is merely supposed, the delusion will be complete, and the credulity partake of the sincere conviction which belongs to a genuine perception. The distinguishing operation has been incomplete, and the constructing operation though complete, yet deceptive, and thereby the most marvelous prodigies, ludicrous absurdities, and startling impossibilities except as miraculous, become the strange perceptions of our own eyes. The constructing agency of the

spectator has been the real conjurer, but as that has been artfully deluded in its work, the deception which it has been induced to practice upon itself is wholly overlooked, and the cheat is not detected.

The vans of a wind-mill in motion, when the axle lies in such a direction to the eye that it is difficult to determine from the sensation merely which end of the shaft it is that is nearest to our position, may easily be made to turn in apparently opposite directions at pleasure. The vans may be arbitrarily constructed as now on this end of the shaft and again on the other end, and the vane is of course constructed as at the opposite end of the shaft to that on which the vans are fixed, and thus the shaft appears to lie now in one direction, and again in a reversed direction. In every such change of construction, the movement of the vans must accord, and consequently if the attending act give them now this and now that position, their motion must appear in opposite directions alternately. The apparent motion is wholly controlled by the arbitrary construction, and the facts are thus in colligation by our hypothesis.

So, again, with the waves running over the surface of the water according to the course of the wind, the constructing operation in attention passes along with them, and it is quite difficult to escape from the conviction that the whole mass of water must be flowing in that direction. The wind may be blowing strongly up the current of a broad river, and the undulations transmit their *forms* rapidly upward, while the *matter* is passing downward; the attention constructs these forms and gives them in appearance according to their succession, while the observation does not distinguish the matter which successively takes on

these forms, but leaves it to appear as the same matter constantly accompanying the same form, and thereby the entire river is deceptively perceived to be flowing backwards in its channel. But we look off upon some level meadow with its tall grass waving on the plain, or on the wide field of ripening grain—

“That stoops its head when whirlwinds rave,
And springs again in eddying wave,
As each wild gust sweeps by;”

and the same form flows onward, and yet there our perception is not deluded. We are forced to distinguish the matter as perpetually changing while the form moves along, from the present conviction that each oscillating top has its stalk permanently rooted in the earth, and this at once dissipates the illusion that both matter and form are moving on together. The observation in its discrimination gives the matter as merely swinging to and fro in its place, as the “eddying wave” careers over the landscape, while the attending operation follows the forms it constructs; and thus the forms flow, while the matter only swings back and forth in our apprehension. The practiced mariner, after long acquaintance with the mountain wave, dissipates all delusion in the same manner. He has learned to distinguish the matter as not the same in the same passing wave, and thus to his perception the waves may run in any direction, while he still apprehends the steadily setting course of the tides and currents.

Once more, only, under this division, we have the facts of deceptive appearances as they are given in cases of double-vision. The intellectual agency is here playing the same

unnoticed delusion upon the appearance in consciousness as above. There is a content in both organs of vision, and from some derangement in the ordinary harmony of the sensations in both, the attending agency constructs each in its own definite form, and thus two objects like to each other appear in the consciousness. Ordinarily, the muscles of the eyes give to each such a direction that the content is topically in each after the same arrangement in reference to the sensible spot, and both the distinguishing and the conjoining agency operate according to an identity in the content of both the organs, and thus, make but one phenomenon in consciousness; but when any derangement from concussion, a brain-fever, or other cause arises, or when the organs are imperfectly subjected to the muscular action, or the sensation distorted as in strabismus, or again when the object is placed between the eyes and too near to permit the axis of each to concentrate upon it, the sensation may be a condition for a double construction, and thus all the phenomena of double-vision occur. The single eye could not probably give the conditions for double-vision; at least in order that it might give such conditions, it would be necessary that its content so affect the sensibility as to induce a double attending operation.

A double perception is effected in the same way through other organs. The touch of different fingers of the same hand, or on the opposite hands may give a deranged sensation inducing a double operation, both of distinction and conjunction, and of course resulting in a double perception. One may be benumbed by cold, or a bruise, or there may be the crossing of two fingers with the object placed between them, and as the content in each may thus be

separately constructed, two objects will seem to be perceived. Double sounds may be given from the different state of the two organs presenting their sensations so modified as to induce the separate construction of both; but inasmuch as the ear is without capacity for giving figure in space, the double operation could not give double object in shape. The doubling of the object as in reflection from a mirror in sight, or of an echo in sound, is not properly a double perception, inasmuch as the content given direct and that in reflection are really different, and their discrimination must be effected as in any difference of content. Where the organ is not double the perception is not twofold, though in single organs the sensations may vary from the same occasions at different times, from some modifications in the state of the sensibility. Thus the same odors, or the same food, or wine, may differ widely in the perception in states of sickness from those of health.

Under all the foregoing divisions, we have now taken many facts, and many more might be readily brought within our induction, and it is here quite evident that they are all readily bound up in our ideal hypothesis with which we commenced, and are thus brought into complete colligation. All these facts have embodied within them one actual law of their being, and which law we now know to be in perfect correlation with our assumed hypothesis as idea; and thus far we have a science of these facts, because we can expound them in their own law of being and arrangement. And now, it would be safe, as an inductive science, to say here that our induction of facts has been sufficiently broad to warrant the deduction, that the law in these facts in the process of perception is the law for perception itself univer-

sally, and thus to conclude that all the facts which experience may give us in any perceptions will be found in colligation with those already attained. It is, however, competent to very much further corroborate such a conclusion, by what we have termed *the Consilience of Facts*, and to which we will devote the next section, previously to any general deductions from the facts attained within the comprehension of our hypothetical idea.

SECTION III.

THE CONSILIENCE OF FACTS.

WHEN facts, which have apparently a very remote bearing from each other, and which at first seem widely disconnected, and would induce the expectation that if they are ever made explicable it must be from reasons and principles very diverse from each other, are yet found to leap together, as it were, in colligation with facts more manifestly allied, and which may have already been brought together in an induction, we have a case of what we here term the Consilience of Facts. The confidence in the general law thus deduced is augmented in proportion to the number of the facts and the distance whence they thus jump together within the same hypothesis.

An illustration of the force of such facts to corroborate the general law may be given in the example of the precession of the equinoxes as leaping within the law of universal gravitation. The longitude of the fixed stars, measured

from the point where the sun's annual path cuts the equator, will from time to time change, if that point changes. Now the fact of such a change had been very early noticed by Hyparchus and observed by subsequent astronomers for near two thousand years. But for such a fact, no explanation was found. The phenomenon appeared, but stood quite anomalous among the other facts of astronomy. But when Newton had made the grand discovery of the law of gravitation, and had applied it to the explanation of many facts of planetary motion readily embraced within it, this remote and apparently wholly disconnected fact of the equinoctial precession was found very unexpectedly to leap within the same generalization with the apparently much nearer allied phenomena in the heavens. The equatorial diameter of the earth is greater than its polar diameter from the aggregation of matter accumulated about the equatorial region through its diurnal revolution, and of course the action of gravity which is as the quantity of matter must be thus modified. The disturbing force hereby induced is, when accurately calculated, precisely that which accounts for this change of point in the sun's annual path, and thereby solves the whole anomaly. The leaping of so remote and remarkable a fact within the same general law which had become readily applied to more obvious phenomena was an unanswerable confirmation of the general law, since no mere casual coincidences could have resulted in such extended systematic connection. It was a most beautiful manifestation of the comprehensiveness of the law and the harmony of its operation.

And here facts may be found which leap within our ideal hypothesis for perception, quite as remote from the

others embraced as in the case of the precession of the equinoxes within the general law of gravitation, and though not as remarkable in themselves, yet tending as effectually to corroborate the general law, within which they unexpectedly come in consilience. Some of these facts we now proceed to include in our induction.

The arts of drawing and painting have their facts which may readily be seen to come within this consilience of inductions. The two may be taken as one, in those respects in which both are designed to represent form as extension in space. The ideal creations in the mind of the artist, subjectively, are the product and proof of his genius; but when he would give to these ideals an objective representation, he is conditioned to just such a process of delineation and coloring as he would be in representing some original actually existing in nature. His idea, as a landscape, a face, or a group of objects material, vegetable, and animal, must be drawn and painted in the same method of operation as if he were actually taking some copy from nature. Separate from the creative invention of his genius, he is necessarily a copyist according to the conditions imposed by nature itself: and the completed product must be tested by its general conformity with these conditions of nature. If that which is put upon the canvas in its outline and coloring gives such an appearance as that ideal would if made to exist in nature, the operation is complete and the painter is perfect in his art. In the execution of this part of his work he must derive instruction from observation and practical experience.

Where the representation is to be made without the coloring in its lights and shades in painting, the result is effected simply by drawing lines in a skillful manner to give

the figures and proportions of nature ; and to see how exact the copy may thus be made, even in minute and very peculiar expressions, we need merely to glance at some finished production in sketching or engraving in outline. How is this surprising resemblance effected ? Certainly by copying nature, in some way, and yet not at all in making the product itself like nature, but solely by inducing the spectator himself to construct such a product. In the picture there has been used nothing but certain lines with their curves and angles, while in nature, animate or inanimate, no lines are presented to the eye and only masses of color and combinations of light and shade. A definite portion of space is thus filled, and, as content in the sensibility, is the condition for perceiving the object. Nature uses no pencil or engraver's tool to make outlines. She puts the mass of colors into space, and fills a definite portion, and leaves that portion surrounded on all sides by an outer space beyond it. When this is received as the content in sensation, the attending agency moves over it, and thereby conjoins it in the unity of figure which is perceived as definite object.

And now the same intellectual operation in the spectator must be secured by the work of the limner. The attending process must be conditioned to the same track in the picture as in nature, and in this way the appearance is a representation of nature. But this is effected not as nature accomplishes it, by giving the whole mass of coloring terminating in exterior space on all sides, but simply by tracing that path in which the artist would have the spectator's attention move, by a simple line precisely where in nature the mass and the surrounding space meet together and limit each other. In this manner precisely the same construct-

ing operation, and thus precisely the same form is secured both in nature and art, and as the distinction of quality is not here regarded, the sameness in form gives the likeness in representation. Nature's law is followed, rather than that nature's object is copied. The intellect in attention is induced by art to move just where the content from nature would condition the movement. Hence the likeness often so very striking, from even a very few apt lines and nice touches. Here, certainly, are many interesting yet quite remote facts leaping directly within the induction which we had before bound in colligation by our ideal hypothesis.

And still further, when the painter pursues his work and would imitate nature not merely in outline, but completely in the whole mass of color, and thereby secure the same sensation as nature's own objects would, the facts in this case have also a like remarkable consilience within the induction before attained.

The condition for constructing the figure of the object from nature is, that the masses of color shall fill their own places topically in the field of the sensibility. The limitations of the object in the surrounding space secure that the whole content in sensation shall observe this condition. But, as thus received, the outline is that of a plane superficies merely. Whether convex or concave, the outline is as of a plane surface only. Thus a sphere and a circle of equal diameters may either of them fill the same space; a column will have the same boundaries in space as a board of equal length and breadth; and each of these will also have the same outline as a concave body of equal longitudinal and lateral dimensions. Thus, also, of all angular forms;

a square when turned obliquely fills in space the outlines of a parallelogram; a cube may have its visible sides in such a position as to fill, not equal squares, but oblong spaces; a circle may have the outline of an ellipse by being turned obliquely in its plane, and when its plane is in the axis of vision it may even become a straight line in the appearance; and a cone fills the space of a triangle. The limits of all these in space are, respectively, like each other.

But in our experience a difference is perceived in all these forms. We distinguish quite readily plane from spherical bodies, squares from parallelograms, and cubes from solids of unequal sides. So, also, a small object near to the eye may fill the same place in the sensibility as a much larger and proportionally more distant body: and yet in our experience we shall readily distinguish the near and the smaller from the distant and the larger. The conditions for such an experience is what we need to find as explanatory of the results. The content in the sensibility must be so given that the peculiarity of forms and distance may be constructed. And when a careful examination is made of the facts, those conditions are readily found. When the outline, as given topically in the sensibility, is the same for different figures and distances, there are yet other conditions by which the right construction is induced. The sphere and the circle may occupy the same place topically on the retina, and be alike revolved nicely over the sensible spot, and if nothing but bare outline be constructed, no difference of figure could be perceived. But the sphere has, as a content in the sensibility, a diversity giving peculiar quality, as distinguishable from the content of the circle. The colors which give light and shade in the sphere are not

in the circle. And thus is it with planes and convex or concave bodies, a board and a column, or a triangle and a cone, their contents differ; and as these are distinguished, the attending agency gives a differently constructed form, and thereby a perception of different figure. In painting, this difference of quality in light and shade needs only to be supplied on the canvas, and the attention gives the form as in the lights and shades of nature. With distances, again, there is not only the difference of light and shade, but also of sharpness and prominence of outline in the sensibility between the near and the more distant, which are to be *observed* in distinction; and as a still more remarkable condition, the capacity of getting the different optic angles for the near and the more remote object, by the position of the two organs in the different inclinations of their optic axes toward the object; or, when still more distant, the different inclinations when the head is in one place, and when moved to the right or left and the axes there directed to the object. Such optic angle as larger or smaller, gives the object as nearer or more remote, and this is to be *attended to* in the conjunction. By thus distinguishing the content in its lights and shades, its intensity and sharpness of outline in the sensation as different for different distances, and constructing the different optic angles, the less for the more distant and the larger for the nearer object, distance is conditioned in the perception as readily as figure from light and shade alone. The eye comes thus to perceive figures, magnitudes, and distances, with a most surprising exactness. The conditions for perceiving different shapes when the outlines are the same, and different sizes and distances when all are on one plane of the retina as given in the sensation, are thus

made quite manifest. And that, through all their complication and remoteness from the other facts in our induction, these do yet leap together within our hypothesis, gives great confirmation to the deduction of our universal law.

That the conditions for distance, magnitude, and figure, have as above been correctly given is also manifest from other facts, which also come leaping within the same induction. Thus for *distances* and *magnitudes* we have the following facts. When the eye receives its content in the sensibility through the medium of a spy-glass, the magnitude of the object is precisely in the ratio of the greater angle, which it is made to subtend through the more or less divergency given to the rays of light by the optic glass as a lens. The distance, also, is in the same ratio diminished. But if, now, we will invert the spy-glass and look at the same objects through the opposite end, the subtended angle is as much diminished as before it was enlarged, the objects are in the same ratio smaller, and also in the same ratio at a greater distance. It is not the intensity of the sensation or the sharpness of outline in the content, except as relatively in its own portions at the same time, for these may be exactly equal in the direct and the inverted spy-glass, but the constructing agency plots its distances and magnitudes from the angles which the objects subtend—the magnitudes directly, and the distances inversely.

Relatively to *figures*, we have the following facts. When some medium for transmitting light gives the content in the sensibility a reversed location in the sensation, the outlines of the content become, of course, transposed to opposite sides throughout the whole field of the sensation. The reversed representation of the object must so appear.

If, now, this object be a plane surface of homogeneous color throughout, the object as represented will appear as a plane, and though reversed as to its sides yet equable upon its surface. But if the object thus transmitted have characters, as letters or emblems, upon the surface, and these characters are in relief, standing out from the plane as in a coin or medal, the object will not only appear reversed, but all the outlines of its characters also reversed, and the lights and shades of the reversed characters transposed to opposite sides. This induces a construction in attention which directly reverses the characters in relief to engraved indentations beneath the surface, and they so appear in perception. And if we substitute the die by which the coin was struck, with its figures as depressions from the surface, the reversing of the outlines of the lights and shades gives the conditions for constructing convexities and not concavities, and thus the characters are perceived to be standing out in relief upon the surface. The whole perception of figure is as the attending agency is conditioned, and thus leaping in all its facts within the same colligation of our hypothesis.

And once more, only, when nature is exactly copied in these particulars as above by the painter, the content given in sense conditions the sensation to be constructed as in nature, and thus the objects perceived in the painting appear as nature. We shall thus have this other remarkable consilience of all the facts of *perspective and dioramic painting* within our already very broad induction. The artist assumes a certain point, and arranges all his work in reference to it. The point in the painting is to be taken as the stand-point for perceiving the objects in nature, and the picture through all its several portions is made to stand at

corresponding directions and angles from that point as in nature, and to receive such colors, and modifications of light and shade, and clearness or indistinctness of outline, as shall condition the like construction from the content given to the sensibility by the picture as would be given by the original designed to be represented. The quality upon the canvas is thus made to appear standing out as in space with all the fullness and life of reality. The rules of perspective painting are thus taken from nature, not in her real forms as in statuary and carving, but only in her colors and angular proportions and bearings from the stand-point. The painter learns to separate nature as she is, from that which is given of her as content in sensation, and puts upon his canvas that precisely which is the counterpart to the sensation, and passes by all which the intellectual agency constructs in nature, leaving that operation to be effected in the same way as in nature from the conditions in the picture. In proportion to its perfection, the painting puts the same content in the sense as nature would, and the distinguishing and conjoining operations of the intellect give the same qualities and forms to the consciousness, and thus the picture becomes the resemblance of nature.

So, on the plane surface of his canvas the artist spreads out the conceptions of his genius before us. The sensibility receives the content, and we observe and attend. The quality is distinguished, and the forms are conjoined. The light and shades through all the coloring, and the figures, magnitudes and distances over all the extension, are thus together constructed in consciousness, and give the perceptions in all their distinctness and definiteness, and, as a whole, the designed scene in all its completeness. Perhaps

it is the interior of some magnificent temple; its massive architecture appears in all its grandeur, comprising long ranges of columns and broad and high arches, extended aisles, ascending stair-ways, and lofty galleries, with all their beautiful proportions. A throng of persons in all their variety of height and figure, of attitude and costume are seen to crowd its courts and porches, sit upon the benches, or walk over the tessellated pavements. With the single exception of motion the canvas gives all that nature does; or rather without exception, it gives all that nature does in one instant of the sensation, and the intellectual agency in its operation of distinction and conjunction puts within the light of consciousness the same appearance as would be conditioned by nature itself. The rules of perspective, and of dioramic representation in art, are simply a transcript of the conditions in sensation for open vision. All the facts jump together into the same conclusion of our general law for perception, and both the consilience and the colligation of facts alike find their systematic arrangement and adequate explanation in our assumed ideal hypothesis.

Perhaps it might now with safety be asserted, that no deduction of a general law from any induction of facts, could be more convincing, than that of the operation of distinction and conjunction for all perception. As an inductive science, we might here affirm that we have an idea correlative to an actual law in the perceptions of the sense.

But, our *à priori* investigation capacitates for a much higher ground of affirming this general law, than any induction of facts can reach, however multiplied they may be. At the most they are yet partial, and can give only probabilities, not certainties, beyond the actual induction in the

experience. In our *à priori* conclusions we demonstrated necessity and universality for our idea. We found that only in accordance with its conditions was any perception of phenomena possible. When we now find this *à priori* idea to have its correlative in an actual law in the facts, we are fully warranted in affirming for this actual law a universal extension to all the facts of perception, upon the high ground of an already demonstrated necessity and universality, and not merely as a deduction from a wide induction of particular facts. The *à priori* demonstration capacitates us to say, this actual law *is* so in the facts induced, not only; and *may be* deduced as general law from this induction, not alone; but much more than this, this actual law in the facts *must have been* as it is; and it must extend to all the facts which any experience shall give in the perception of phenomena *universally*. We have a transcendental demonstration of the *universality* of our law, as actually found in real colligation of facts.

Here, then, we complete our science of Rational Psychology in reference to the Faculty of the Sense. We have attained its *à priori Idea* both for the pure and the empirical intuition, and found it in this—that content must be given in sensation, and that this must be *distinguished* in its matter, and *conjoined* in its form, as conditional for all possible phenomena in perception. This *à priori* idea has not only been attained as *pure thought*, but we have assumed it hypothetically, and questioned actual experience largely under its direction, and have gathered a wide induction of facts which are manifestly held in colligation by it, and from which it would be safe to make the deduction, that this law in the facts induced, as correlative with our

ideal hypothesis in which the facts have been bound up, is a *general Law* for all the further facts of perception that any experience may give to us. The correlation of idea and general law gives us in this a valid *Inductive Science*. But, inasmuch as all skepticism can not be thus excluded, because the deduction of the law is yet from a partial induction of facts, and also because the law is still only a fact, we have gone much further than a mere deduction from the partial, and have given to this law actually attained, the *a priori* demonstration of necessity and universality, in which we have *Transcendental Science*. A valid *science* of perception in the sense is hereby attained, and we may from it not only perceive phenomena, but philosophically expound the process of perceiving. We not only may know as percipients of the phenomena know, but much more than this, we know how the perception *is* and *must be* effected. We know the appearance not only, but the *knowing* of that appearance. In this is science; and from its *a priori* demonstration is transcendental science; and thus a *rational*, and not merely an *empirical* or inductive Psychology.

Here our work as appropriate to the first Part, would be terminated, inasmuch as the Psychology of the sense is here completed; but, as we have before indicated, the conclusions of Rational Psychology give the data for the demonstrations of Ontology; and as such a process of demonstration is of great importance, and leads to most interesting results in the determination of the *valid being* of the objects as known in that capacity which has been psychologically investigated, so we shall, in a separate form as an Appendix, give here an outline of the ontological demonstration for the *valid being of the objects*—the phenomena inner and outer—as perceived in the faculty of the sense.

APPENDIX TO THE SENSE.

AN ONTOLOGICAL DEMONSTRATION OF THE VALID BEING OF THE PHENOMENAL.

THE sense *perceives*, and perception is the apprehension of phenomena only. Internal phenomena as mental exercises and external phenomena as material qualities are apprehended, but the subjects of the exercises and qualities can not be cognized by any functions of distinction and conjunction.

Moreover, all that the sense can apprehend is only in and for the percipient himself. The affection in sensation is in *my* sensibility, and the operations of distinction and conjunction are by *my* intellectual agency, and the phenomena distinguished and defined are for *me* only and not another, and as apprehended in the light of self-consciousness can permit no other percipient to commune with me in the same phenomena. We must have other functions than those of the sense or any possible abstractions or combinations of sensible phenomena, before there can be any one field of objects as common to all.

We are not here, therefore, to inquire for the valid being of that which is object to many, but only for that which is made object for each one, and we can not give the full

demonstration against the Materialist and the Idealist, until we have investigated the higher function of the understanding, and found the Idea and Law for the cognition of permanent substances and perduring causes. The inquiry is solely to this point: are the phenomena valid appearances in my consciousness, or only phantoms? And the demonstration goes at once to the affirmative answer.

I. *Valid being of the inner phenomena.*—Within the primitive intuition of space and time as solely a diversity of points and instants, we have found that an intellectual agency enters and constructs pure figures and periods. The whole work is within an immediate beholding in the light of consciousness, and all the relations and proportions of such constructions may be made intuitive demonstrations over the whole field of pure mathematics. The internal state is here affected solely through an inner agency, and yet it is really affected. The constructing, the intuitively beholding, and the mathematically demonstrating are as real phenomena in the inner sense as when a content in organic sensibility is discriminated and constructed. Although the forms are destitute of any organic content in sensation, yet the agency constructing is not a mere seeming but a veritable appearing in consciousness. Wholly irrespective of any outer impression, the inner mental phenomena have a conscious valid being.

It can not invalidate this to urge that previous impressions had been made upon the sensibility, and that the affected organ may make its own repetitions of forms and be the sole origin of the agency. Were there nothing but the organism acted on by outward impulses, the process of constructing forms would be wholly mechanical, and when

there was no impression from without then the organism must be quiescent. No mere organism could acquire spontaneous self-activity from having once been put in operation by external appliances. And besides, the pure forms are more complete than any organic impressions can attain. The mathematical circle, or cone, or other figure, constructed from the scheme of a line revolving about one of the ends or a right-angled triangle about one of the sides subtending the right-angle, etc., are perfect. So also with the ideal constructions of the sculptor and painter. What artist can make diagrams or pictures as perfect as his ideals? No mechanical copy ever equals the pure ideal form. While, then, the pure but perfect forms only *seem* to be, the agency constructing truly *appears*, and as constructing agency is a valid phenomenon wholly independent of the organic sensation.

This same demonstration of valid inner phenomena is cumulative in two other applications of the constructing process. We have taken the sensibility as general and wholly vacant, and by an anticipation of content have found the process for distinguishing and defining all possible content, and that process which through a prolepsis results in a determined act of distinction in reality, particularity, and peculiarity, is itself a veritable appearing in consciousness. And so also in actual perception, the impression upon the organic sensibility may be complete in the sensation, but in this alone no perception is effected. The content is yet a chaos for the consciousness except as intellectually elaborated into distinct quality and definite quantity, and the observing and attending agency is wholly mental, and the exercise fully in the consciousness, and thus truly appears.

Both the construction of possible and of actual content give the *constructing exercises* as valid. There is thus abundant proof for the valid being of the mental phenomena.

II. *Valid being of the outer phenomena.*—We may, on the other hand, demonstrate the valid being of the external phenomena, and show that they are not made by the organ itself nor by the intellectual agency within working upon the organism. It is admitted that there are many occurrences of illusory phenomena, fantastic and chimerical. So with dreams, and the hideous forms which haunt the inebriate in fits of *delirium tremens*, and the more questionable instances of ghost-seeing, Scottish second-sight, and mesmeric clairvoyance. There may be such mysterious *seeming*, where there is no real content in the sense as actually *appearing*. A vivid remembrance and spontaneous combination of old impressions, strong emotions controlling the constructing faculty, or perhaps the reflex action of the intellect working, as it were, upon the back part of the sensibility, and projecting wild and unregulated forms forward for the consciousness, may account for most, if not perhaps for all such illusory visions. There are moreover the supernatural visions of inspired prophets and seers, where the content and construction were determined by a miraculous agency for revealing God's own purposes before the actual events. All such cases evince that there may be seeming visions and voices where no organic content is present. The skeptic may use such occurrences as data for concluding against the validity of any phenomena. But while we may admit all such instances of fantastic or miraculous appearance, and allow that they can be only an objectifying of our own inner agency, or of some miraculously spiritual

agency working in us, yet can no amount of such cases at all disturb the positive demonstrations we may here make for valid objective phenomena.

Aside from all such morbid or manifestly abnormal perceptions, we have the vastly preponderating amount of our organic perceptions in a manner that can be tested and their content clearly determined. By careful reflection, we can consciously detect the agency discriminating and conjoining a content that we can neither make nor unmake. We may turn away or obstruct the organ, and then the content can be neither retained nor anew supplied. We can again fitly direct the organ, and the content can neither be prevented nor expelled. We can consciously distinguish and construct this content, but can do this in no other way than according to its own determining conditions. In our anticipation of a content, this may be as we please, and the form may be constructed as we choose, but such arbitrary constructions can never be made other than empty ideals in the consciousness; while with our organic content distinguished and defined, we can never abolish the consciousness that it has a real appearance, nor make it to put on for us a mere ideal seeming to be. There are, therefore, objective phenomena, valid and wholly independent of all subjective production. We thus demonstrate the phenomena of the sense to be both of the internal and external senses, and thus that there are phenomena which may be known as some, mental, and some, material. What the mind and the matter themselves are we can not here determine, for we have the psychology as yet only for perceiving phenomena, not at all for cognizing substances and agents.

That our knowledge begins in perception, and that our

perceptions attain valid phenomena, may thus be demonstrated ; but that any thing other than phenomenal, and that within our subjective sphere, can be real, the sense has no data for proving. How beings without our organs may know, we can not here determine. They could not have in consciousness heat and cold, sweet and bitter, fragrant and fetid smells, and must know them, if at all, wholly without their own experience ; as Omniscience must know what remorse to us is without His own experience of it.

This phenomenal world of inner exercises and outer qualities, though single, isolated, and fleeting in all its perceived objects, and wholly in a perpetual flow, is yet a world of reality, and not mere dreams nor ideal semblances. The actual content in sensation distinguishes all phenomena in perception from spectral illusions, mental hallucinations, or credulous clairvoyance. It is knowledge valuable for its own sake, and worth more for the use hereafter to be made of it. Its full explanation is science begun, a first and necessary step toward science completed. Other and higher objects remain to be attained, but the higher are beyond attainment except as we avail ourselves of these here given. In this philosophy of the Sense, the door opens to more spacious and more splendid apartments, but we may by no means enter except through this fore-court of the Temple of Science.

PART II.

THE UNDERSTANDING.

THE NECESSITY FOR A HIGHER INTELLECTUAL AGENCY THAN ANY IN THE SENSE.

PERCEPTION in the sense gives to us phenomena in real appearance, and not as mere fantastic illusion. But such phenomena are in the sense necessarily fleeting, isolated, and standing wholly in one self. The discriminating agency distinguishes only the content given in the sensibility, and which is a perpetual coming and departing: the constructing agency conjoins this distinct content as quality separately, and thus in one form of its quality only as definite object at once; and all this only for the self, in whose consciousness this distinguishing and conjoining operation is carried on. Each phenomenon must thus occupy its own space and its own time in the self-consciousness; its appearance disjoined from all other phenomena, its place from all other places, and its period from all other periods, and the self-consciousness, in which the appearance, place, and period are, disjoined from every other self. From the very functions of the sense in their law of operation, it must be

wholly impracticable that it should give any thing other than definite phenomena, definite places, and definite periods, as single parts of nature, space, and time, and can possibly know nothing of any connection of these parts, as the components of one whole. All parts are to the sense definite totals, and the conception of a universe of nature, and a oneness of all space and of all time, is from any agency in the sense wholly impracticable. One phenomenon has gone when another has come, and its place and period came and went with it, and the conjunctions in the departed have no connection to the conjunctions in the becoming; and thus, neither phenomena, places, nor periods, take hold of each other in their arising and departing in the consciousness, nor connect themselves into one nature, one space, or one time.

As in the perceiving self there can be no such whole of all phenomena, of all space, and of all time, much more must it be impracticable for the sense to give to different perceiving selves a participation in the same one whole of nature, of space, and of time; inasmuch as neither self can have a whole of nature, space and time not only, but neither self can at all participate in any other's definite phenomena, places, and periods. In the sense, each one perceives for himself, and his phenomenon, figure in space, and period in time, are each his own only, and in which none other may participate. How come we, then, by such conceptions as one whole of all nature of which all definite phenomena are its parts, one whole of all space of which all definite places are but its parts, and one whole of all time of which all definite periods are but its parts? Certainly by no functions of the sense. The operation of conjunction defines its object only

so far as the conjunction in unity is carried, and then comes a hiatus separating the next conjunction in unity from it, whether of appearance, place, or time. If I construct a circle in the pure intuition, I know it as distinct from a triangle, as occupying a space, and as continuing a period ; but when that constructed circle has departed from the pure intuition, and I now construct a triangle in pure intuition, while I know the triangle as distinct from a circle and as having place and period, yet do I not know this triangle and that circle as having any connection with each other in themselves, their place, or their period. The circle, in its conception, place, and period, has altogether departed ; the triangle, in its conception, place, and period, has come in ; and a chasm, which no construction by a conjunction in unity can bridge over, separates them ; and my intuition can not determine that the conceived circle and triangle, and their places and periods, have each with each any connection. The being of the circle is gone, the place it occupied is gone, and the period it filled is gone ; and that the conceived triangle now come, and its place, and its period, have any connection in a whole of all conceived being and of all space and of all time with the conceived circle in its departed being, and place, and period, the intuition can have no possible functions for determining. And so, precisely, with the relation of a departed and a becoming phenomenon. The redness and its place and its period have all departed, and a whiteness in its place and period is now in its becoming ; but for the sense there is a chasm of nihility between the two, and an impossibility of saying that the redness and the whiteness are connected in one whole of nature, their places in one whole of all space, and their periods in one

whole of all time. To the sense, every definite construction of a phenomenon in place and period, stands only in its own isolation. It can construct definite phenomena, in their distinct quality, into different figures and periods definitely; but it can only construct, and from one construction to another it can give no connection. Its definite phenomena it can not connect into one universe of nature; its definite places, into one whole of space; nor its definite periods, into one whole of time. Each intellect in self-consciousness must construct its own phenomena, and these will be perpetually departing and utterly disjoined from the becoming; and thus to no self-consciousness can there be in the sense any connection into one whole of nature, of space, and of time, nor can one self-consciousness in its constructions commune with any other self in its constructions. Were there no higher functions than the sense, phenomena in their places and periods would be a mere rhapsody of becoming and departing constructions, and in such a hap-hazard dance of appearances, that all conception of a connected whole of nature, of space, and of time, would be an impossibility. In order that we may know other than isolated phenomena in their separate places and periods, a higher faculty than that of conjunction in sense is necessary.

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II.

THE EXPOSITION OF THIS HIGHER AGENCY AS
UNDERSTANDING.

THE intellectual agency gives two different kinds of relations in the consciousness. One kind is that which has already been considered in the sense as the operation of conjunction. The diverse elements are taken in their manifoldness and conjoined in unity, so that they stand together within limits and become a total, and the bond which holds them in unity, is both different from, and external to, the elements themselves. The elements are brought into juxtaposition, and make a whole as an aggregate simply, and thus the relation is one of *collocation* only. When I construct a triangle in pure intuition, I merely conjoin the diversity within external limits, and the area of the triangle becomes a whole, simply in virtue of this external defining of the diverse points contained within the limits. So also in the construction of any phenomenon in its form, the same relationship of collocation only is effected. The content in the sensibility, as color in vision, is conjoined in attention, and thereby defined in its figure, and thus becomes a definite whole as colored surface placed within outer limits. Of this kind are all the relations of the sense, pure or empirical, inasmuch as the operation of conjunction can effect no other relationships, and this is the only operation in the sense which may give any relations. These may be termed *Mathematical relations*.

Another kind of relationship is that where the elements

are held together by an inherent bond, and all coalesce in one whole, and which is thus not a mere aggregation and relationship of collocation, but a relationship of *coalition*. All the parts are reciprocally inter-dependent, and together constitute an organic total. Thus with the whole plant or animal, the elements are not merely together in a mass, but there is an inner bond in which they all grow together. The union is not local or periodical, but dynamical: and as distinguished from the former, we may term this kind *Philosophical relations*.

A *Judgment* is a determined relationship between two or more cognitions, one of which qualifies and is *predicate*, the other of which is qualified and is *subject*. When in the possession of one cognition I can by an analysis take the other cognition from it, and predicate this latter of the former, it is an *Analytical Judgment*. Thus of the cognition of a line, I need only an analysis of what is already contained in the cognition and I shall find the further cognitions of extension, divisibility, etc., and which I can predicate of the former cognition and say at once in an *Analytical Judgment*, the line is extended; is divisible, etc. The validity of such judgments is determined in the clearness of the analysis itself. It does not add anything to our knowledge, for we have only that in the judgment which we already possessed in the original cognition; but the separate analysis has made the original cognition more clear, although it has thus been not at all extended.

When, in some way other than from the cognition already possessed, I attain a new cognition in a determined relationship to a given one, and thus add something new as predicate of an old cognition, it is a *Synthetical Judgment*;

and in this the cognition is extended over more than its former ground. Thus the cognition of a phenomenon as color may not only be analyzed, and hence in an Analytical Judgment it may be affirmed that the color has place, has shape, has divisibility, etc., but that which no analysis can get from it, a further observation in experience may find as new and add to it, and thus affirm in a Synthetical Judgment, that the color is changed in its intensity, its place, its shape ; or it is in motion, is blended with the other colors, or is faded away, etc. The validity of this form of a Judgment depends wholly upon the valid attainment of the new cognition.

And precisely in this validity of the attainment of the new cognition to be predicated in a judgment as qualifying the old, as it differs in evidence between the Mathematical and the Philosophical relation, is the importance and necessity of the exposition of this higher agency as an understanding. Mathematical relationships are given in the constructions of the sense, and the operation of conjunction can give only such relations. The construction being effected, the relation of all particulars in the diagram stand open in the consciousness to an immediate beholding, and the new cognition for an Extended Judgment is thus a direct intuition. The specific relation which exposes the new cognition, is seen in the construction ; and thus the synthetic judgment is manifestly valid. If I construct a circle in pure intuition, the relation of its radii is immediately seen in the construction itself, and the new conception of *equality* thus attained is legitimately added in a synthetic judgment ; and so with all possible mathematical relations, whether pure or empirical. The process is synthetical, viz., the adding of

some new cognition in a judgment through all the process ; but this new cognition is always attained, *in an immediate intuition in the construction itself*. An exact definition gives occasion for an affirmation of the exact relationship, and the same for a phenomenon in its empirical form as in a pure form in the primitive intuition. The judgment, though synthetical, is also *intuitive*.

But this can not so be effected in philosophical relations. The new cognition is not one that admits of becoming at all an immediate intuition. There can be no construction effected in which it may be seen. I may construct the form of two colors in space, and in the construction see all the relations in space of the two phenomena, and thus affirm that one is square and the other is circular, one is without or within, above or below, larger or smaller, etc., and in time earlier or later, of longer or shorter continuance, etc., than the other. But I can not so construct any two phenomena, as to see in the construction that they both inhere in one ground, or that both originate in one source. The new conception is of an inner bond which will not allow of any construction, and can not thus become intuition. That in which the phenomena coalesce, and by virtue of which they are held in one whole, is altogether supersensual, inasmuch as it is wholly beyond the conditions of any conjunction in unity. That the redness and the smoothness are in one place and period, may be affirmed from the sight and the touch, and a construction may be made to represent them externally, by a painting ; but that they inhere in one ground as their subject, which we call a rose, we can not make to be immediate intuition, because no construction can possibly give this supersensuous ground, or common subject, to be immedi-

ately seen. That the phenomenon of heat, and that of evaporation, have a relation in their periods, and what that relation is, may be affirmed from a construction in the sense intuitively; but that they are connected as source and consequence, by an inner bond of causality, can not be an intuition of the sense, inasmuch as no construction can possibly give this to be immediately seen. Philosophical relations are altogether of this supersensuous kind, and their inner bond, through which all coalesces in the unity of a whole, is beyond the practicability of any construction. The forms of space and time can have nothing in which it may be represented.

The philosophical relation always involves a new cognition, which can not be attained by any analysis of the phenomena that are held in relationship by it, and thus the judgment is always synthetic. That the two phenomena are affirmed to be thus related is by reason only of this inner supersensual bond, and the adding of this in the judgment is an extension of the cognition, and as it is thus no product of an analysis, and as before seen is no possible intuition in any construction, it must somehow be attained in its own peculiar manner, and demand that for it a peculiar function should be supplied, other than any thing which the faculty of the sense can give. As conjunction only puts together in collocation, while this gives internally a coalition; the first a collection, this a connection; I shall so distinguish it as the *operation of CONNECTION*. And as the intellect *conjoins* in the sense, so its *connecting agency* belongs to the faculty of the understanding. This faculty of the understanding, as that which gives the relations of phenomena in their inherent grounds and sources, and thus

from being conjoined into isolated qualities they become known as connected into existing things, it is now our business fully to investigate. By this distinction of operation, as *connecting* and not *constructing* agent, we have wholly separated it from the faculty of the sense already examined, and in this isolation of being, the claim is, that we attain an *a priori* cognition of how it is possible that such an operation of connection may be effected, and thus how an understanding must be regulated in its functions if it is to have any synthetic judgments of philosophical relations, and this will give the understanding in its *Idea*. It will then be necessary in another Chapter, to attain in the facts a *Law* in actual operation, the precise correlative to this *a priori* idea, in which we shall have a valid science of the Understanding, as before of the Sense. We may then use these conclusions for an Ontological Demonstration of the valid being of the objects given in the Understanding.

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CHAPTER I.

THE UNDERSTANDING IN ITS SUBJECTIVE IDEA.

SECTION I.

THE UNDERSTANDING NECESSARILY DISCURSIVE.

CONJUNCTION gives definite form in space and time, and thus all conception of its products is of that which is brought directly under an intuition either pure or empirical. But such products can have no other relationship to each other in our knowledge, than that which belongs to the forms of space and time. They may be *conjoined* in space or time, but can not thus be known as *connected* in their own internal being. 'A dynamical connection can not be constructed, and can not, therefore, be accurately defined; it can admit only of a description which shall suggest, not of a definition which shall make to appear. The bond which constitutes the relation is thought as inherent in the cognition related, and thus while the related cognitions are constructed, the bond as their inherent connective is not and can not be constructed, but is a new cognition of a very peculiar kind. Thus two billiard balls may be constructed in space, and the meeting of the one in motion with the other at rest and the consequent displacement of the latter may be constructed in time, and the point in space and in

time of their actual contact may be given in an intuition by the construction ; but all this will not in the least serve to give the cognition of the dynamical bond, which we may in this case call *impulse*, that inherently connects the impinging of the first and the displacement of the last together. This cognition of impulse, here, is not only new numerically, but quite new generically ; the cognition of the balls, and their contact, and their antecedent and consequent motion, all admitting of a construction and thus of an accurate definition in the immediate intuition, but the cognition of impulse not at all admitting of such construction, definition, and direct intuition. It can only be *thought*, not *perceived*.

Precisely thus, with all connection as *ground* ; it can no more be constructed, than can the connection of impulse above given as *source* of the displacement of the second ball. The form of the whiteness and that of the hardness of the ivory ball may be constructed in the vision and the touch, and both may be referred to the same place and the same period intuitively, and thus a definite conception of their relationship in space and time may be attained, but this will not at all serve to give the common ground in which both the whiteness and the hardness inhere, and which gives to them the relations of qualities in one thing. This last is a cognition as connection, and not at all as conjunction ; it is only thought, it can not be perceived. It belongs wholly to the understanding in its work of connection, and can not be attained by the sense in its work of conjunction.

And now, to distinguish this cognition of the bond as product of the operation of connection from the product in

the operation of conjunction, we must appropriate an exclusive term. The whiteness and hardness, the motion, contact, and displacement of the billiard balls we call *phenomena*, because they are made to immediately appear in a definite construction. They may differ as *quality* connected in their ground, and as *event* connected in their source; but all are alike phenomena, inasmuch as each is made to appear, and all are given in the sense. The antithetic term to phenomenon, from the same Greek language, would be *noumenon*; but as this has been much less familiarly incorporated into the English language we shall, at the expense of derivation from another tongue, take an equivalent term for this antithesis from the Latin *notio*, and call this new conception which the understanding in its work of connection can alone supply, *Notion*. This is to have its exclusive application in this work to this specific cognition—the bond of relationship as product of connection; and never to be applied to any product of conjunction. Thus we shall not say a notion of hardness, whiteness, motion, contact, displacement, etc., all of which come under the term phenomenon; but we shall say a notion of the ground, source, etc., for the connection of phenomena. Phenomena will be conjoined by phenomena, but can be connected only by the notion. The phenomenon is wholly in the sense, the notion is wholly in the understanding.

The notion, as supplied in the understanding, is put under the phenomena as substratum in which they inhere, or as source on which they depend; and, as it is a peculiar operation of the intellect which receives this notion, and makes it to *stand under* the phenomena as their connection, so this function of the intellect, as faculty for connection,

s appropriately termed *the understanding*. The same intellect *conjoins* the diversity—and this is the faculty of the sense—which *connects* the phenomena—and this is the faculty of the understanding.

This connecting of phenomena in their grounds and sources by the understanding is the act of *thinking*, and the product should be termed a *philosophical or a logical judgment*, distinguishing it from the process of conjoining in unity, which is the act of *attending*, and the product of which, as intuitively affirmed, is a *mathematical judgment*. Both are synthetic, inasmuch as both attain a new cognition in which the relationship is given; but in one case, as the mathematical, the new cognition is attained by an immediate intuition in a construction; and in the other, the philosophical, the new cognition can not be constructed and thus can not be intuition, but is wholly supplied as thought or notion in the understanding. This connecting of phenomena in their notion is *pure thinking*, when the phenomena are not given in the sense, but are merely the conceptions of phenomena by a prolepsis or anticipation purely mental. The whole work is thus entirely intellectual. The anticipated content is constructed in the sense when there is no actual sensation, and is thus a conceived phenomenon only; and the notion, as connective, is wholly supplied in the understanding as pure conception also; and thus the whole process, though combining both intellectual conjunction and intellectual connection, is wholly a mental conception and therefore pure thinking. *Empirical thinking* is when real phenomena are thought as connected in their grounds or sources. This last is properly *experience*—the connecting of our perceived phenomena in their notions, as their ground

or source of being. When phenomena are thought as connected in their ground, the product is called *a thing* ; when as connected in their source, the product is an *event* ; and when both thing and event are conceived simply as originated being, they are *facts* (*facta, res gestæ*).

This connecting of things and events may go on indefinitely, and when it is pure thinking, the whole product is *a train of thought* ; when empirical thinking, it is *an order of experience*. This thinking in judgments in the understanding, it is manifest can never be made intuitive. The phenomenal cognitions may be constructed in their conjunctions of space and time, and their relationship of conjunction be intuitively apprehended ; but the notional cognition can not be constructed, nor intuitively seen in any construction, and thus the relationship of connection can not be intuitively apprehended. We can never so construct the whiteness and the hardness of the billiard ball as intuitively to see the ground in which they are connected, nor so construct the impinging and the displacing as intuitively to see the source in one out of which the other springs. Our construction of the whiteness and hardness may give the *roundness* in space, and we may thus call it a *ball* ; but this is still only quality and not ground. The qualities of whiteness and hardness and roundness are all thought as in one and the same ground, which we call *ivory* ; but this ground, called ivory, is wholly supplied as a notion, and not at all as an intuition. So also, our construction of the impinging and the displacing may give *succession* in time, and we may thus call one antecedent and the other consequent, and the whole in combination *sequence* ; but this also is still event, not source. The events of impinging, and displacing, and

their sequence, are all thought as in one point of connection, which is a source that we here call *impulse* ; but this source, called impulse, is wholly supplied in the understanding as a notion, and not in the sense as an intuition. So must it ever be in all thinking in the understanding, that the connective in the judgment can never be supplied by a construction and can thus never be made an intuition. The difference between the mathematical judgment that a straight line is the shortest that may be drawn between two points, and the philosophical judgment that the whiteness and hardness are qualities of the ivory, or that the displacement of the second ball by the first was from impulse, is at once palpable. In the first, as mathematical judgment, we construct the cognitions and we intuitively see in our construction the new cognition of relationship, which we name *the shortest* ; but in the other, we can possibly make no construction that shall give intuitively the new cognition of relationship which we name *the ivory* as ground, or the *impulse* as source ; and from which connectives only can we form our philosophical judgment.

In the philosophical judgment, we are obliged to receive the notion in the understanding, and then the relationship is always apprehended only by a *discursus* through that notion ; and thus the judgment is necessarily *discursive*, not intuitive. We go from the whiteness to the hardness, in our connecting of these as qualities in a thing, through the notion of ivory as common substratum ; and we go from the impinging to the displacing, in our connecting of these as events, through the notion of impulse as source in the antecedent for the origination of the consequent. The judgment can only be formed from the process of connection ;

and the connection can only be made in the notion ; and the notion is supplied by no possible intuition. We can thus connect, 'i. e., think in the understanding, in no other possible manner than discursively. The understanding is faculty only for connecting, not for constructing ; for thinking, not for attending ; for discursively concluding, not for intuitively beholding. It attains philosophical or logical judgments, not mathematical axioms. Its judgments are truly dependent upon an *a priori* cognition, and are conditional for all experience. That I have the sensation of warmth may be given in the sense, and when, and how much ; but all this will be isolated sensation and not connected experience, except as I can connect that sensation with other sensations in their common grounds and sources, and say the sun or the fire warms me. But in order to such judgment in experience that the sun warms me, I must assume the notions of both ground and source, and, discursively, through these conclude upon the judgment in experience. The experience does not and can not give the notion ; the notion is conditional for the connected experience.

That the notion is *conditional* for all experience, as a connection of the phenomena into things, should be fully apprehended, and may be very conclusively determined. Thus, I may have the definite and distinct qualities of a hardness, a coldness, a brittleness, a transparency, etc., as real phenomena in perception, but they are all necessarily, separate from each other as given in perception, and no conjunction can go any further than to give to each its complete form as phenomenon, and let them stand singly and separately in the consciousness. But when the understanding has its notion of a ground common to them all, the

thinking may then connect them all in it by a discursus from one to another through it, and give to this notion as connective ground a name as thing, and of which the phenomena will all be held in a judgment as common properties or qualities, and I may then say, *the Ice* is hard, is cold, etc. My perception in the sense has given the phenomena only; my thinking in the understanding has given me all the separate phenomena to be connected in one thing; but such a judgment that the one thing—Ice—contained in itself all these phenomena as its qualities, and which is essential to a proper experience of such qualities, could not be attained except I had first assumed this notion of a common ground, through which to make my discursus in thinking the phenomena respectively to inhere in it. So, in the same manner I may perceive the phenomena of a liquidness, limpidness, fluidity, etc., and by a supplied notion as ground I may connect them as the properties of one thing and call it *water*; and then again, I may perceive the phenomena of volatility, expansibility, elasticity, etc., and connect them in a common ground in the understanding and call it *vapor*; and as the result, I shall have the three things with their respective qualities, as ice, water, and vapor. Neither of these things could have been given in a connected experience, but only the phenomena singly in perception, except as the understanding had been supplied with their notional connectives, and thought them in a judgment discursively thereby.

But, still further, with these three things distinct in a judgment of experience, I may proceed in the understanding and supply a higher notional connective as common source for them all, and think these three things to have successively come out of one and the same material substance,

which has now been ice, and now water, and now vapor, and thus on through all possible changes. But it is manifest that no such connection in this comprehensive judgment of an experience could have been effected except as first this higher notional, as common source, had been supplied in the understanding. And thus ever, in all our judgments of experience, whether more or less comprehensive, the experience does not give the connection, but the connection produces the judgment of experience, and this rests wholly upon a supplied notional in the understanding. No possible thinking in discursive judgments can be effected, and thus no experience can be, except through the use of a notion supplied in the understanding. The judgment cannot be *in* the sense, for the sense can not supply the notional, nor make the discursive connection through it; but the judgment is *according to* the sense, for it must be the connection of only such phenomena as are given in the sense. We may thus say of the understanding, that it is a higher faculty than the sense, but though transcending the sense, it yet is a faculty judging according to the sense. It connects only what is first given in the sense.

SECTION II.

SPACE AND TIME THE NECESSARY MEDIA FOR DETERMINING CONNECTION THROUGH A DISCURSUS.

THINKING is the intellectual operation of connecting the cognitions supplied in the sense through the cognitions supplied in the understanding. The sense-cognitions are of the

phenomenal, the understanding-cognitions are of the notional. The intellectual process is ever from one sense-cognition to another by a discursus through an understanding-cognition, and the judgment resulting is wholly synthetical—adding the necessary connection of the phenomenal in the notional—and thereby giving universality to the ultimate judgment, as that all phenomena must stand in some ground, or must originate in some source. And the great question is—how verify this synthesis? How show that the addition of the notional as necessary and universal connective in such judgments is valid? All experience and all inductive science rest alike upon such synthetic judgments, and the former is wholly an illusion, and the latter a mere straining of speculations through a fictitious notional which can leave in the sieve only an empty ideal, except as this whole process of thinking in judgments may receive an *à priori* determination.

If we attempt to explain such necessary connection, as did Hume, through the frequency of observation in experience, and thus that habit only induces the conviction of necessary connection, we leave the judgment to rest upon mere credulity; and all experience and all philosophical science stand upon no firmer basis than “a belief” engendered in “custom.” If we say with Brown, that there are only the phenomena in a certain “invariable order of sequences,” and that all conviction of necessary connection is from the constitution of the human mind alone, which is so made that by a ceaseless and infallible prophecy it simply foretells the coming of the consequent in the appearance of the antecedent, we leave again all validity to experience and inductive science wholly amid the mysteries of this constitutional

and instinctive prophesying. To take, with Reid, this necessary connection as the mere dictum of common sense, and make this an ultimate fact in which all experience and all philosophy must begin and back of which no investigation can reach, is to admit at once that experience and philosophy have only an assumed original, and that neither can possibly return back and examine the source in which it originates, nor expel the bane of skepticism from either the fountain or its streams.

When we have demonstrated the reality of the phenomena by our foregoing *à priori* process, still all the above methods of accounting for the conviction of the necessary connection of the phenomena leaves the whole as a mere matter of credulity or assumption, and no thinking can terminate in a judgment that shall have any higher validity than mere opinion. The roundness, whiteness, hardness, etc., are veritable phenomena; but that they are all connected by an inherence in one notion as their ground, and which we call "ivory," and are thus qualities in one thing, we may believe or hold as opinion but can never determine. The motion of one ball, and its contact with another, and the retardation in the first and displacement of the last ball are real phenomena; but that the retardation and displacement are connected in one source with the motion and the contact which precede them, and which as connective notion we call "impulse," and thus that they are events held together by one agency, we may believe or opine, but we can never know. And all philosophy founded upon any induction of such facts, however broadly and carefully made, must also alike rest only upon mere opinion. We are in this position utterly precluded from all power of reply to that

skeptic who shall affirm that he has examined all these sources of a necessary connection, and has satisfied himself that their whole induced conviction is a mere mist and fog-bank deceptively rising over a stagnant understanding, and which is utterly dissipated in thin air whenever the sunlight strikes upon it from above, or the ebb and flow of active thought agitates it from beneath. But, surely, the interest in the human mind for science, and the intellectual yearning for established truth will never permit an acquiescence in such desponding conclusions, until skepticism has itself become a demonstration; and the only truth found to be this, that man can verify no truth; and that the only foundation for science is at last seen to be self-contradiction and absurdity.

The success in our *à priori* investigation of the sense, and our complete exposition of the operation of conjunction, should encourage to the same effort and anticipated result in the field of the understanding and the *à priori* explication of the operation of connection, and under the influence of so well grounded a hope the attempt to realize it should not be easily abandoned. We are not to take the understanding-cognition upon trust, nor merely because we need it as our connective conditional for all possible thinking, and which can give for philosophy no other basis than an unverified empiricism: nor are we to assume it merely as the condition and law of our subjective thinking, and thereby attain those splendid ideal systems of nature, the soul, and God, which have so highly distinguished the great masters of modern German Metaphysics; but which, denying any thing as legitimately in the possession of philosophy beyond the subjective process itself, have only issued, and for the future ever must only issue, in the emptiness of an

entirely misnamed Rationalism, and which at last is nothing else than the absurdity of a transcendental Pantheism. Subjective thinking and an objective experience differ not in this, that the sense-cognitions are not connected through the understanding-cognitions, for this is conditional for any connecting in discursive judgments whatever; but they differ in this, that in subjective thinking the intellectual operation of connection creates its own judgments within the self, and only for the self who thinks them, while in objective experience the whole process and its result in a judgment is conditioned by somewhat already existing other than the self, and the determination of this other existence in the judgment makes it to be objective to the self, and competent in the same way to be object to any other self possible. One gives wholly an ideal, the other an actual thing in the judgment. And, here the task which we are to accomplish lies directly before us, viz., that we attain the operation of connection itself in its primitive elements so completely, that we may determine how, and how only, an objective experience is possible. In this will be attained the entire functions of an understanding in its possibility, and will thus be the understanding in its Idea after which we are seeking.

Sufficient has already been said to show that no determination of connection can be reached through an intuitive process. The judgment is inclusive of somewhat not admitting of construction, and thus not possible to be brought under an immediate beholding. Conjunction is restricted to the field of the sense, and can by no means project itself within the field of the understanding, and thus it is utterly impracticable that an intuitive passage should ever be

opened between them. Connection is wholly another work than conjunction, and intuitive affirmations wholly other cognitions than discursive judgments. No exposition nor use of the former can be of any significancy in determining the latter. The sense can not think nor give any exposition of the process of thinking. Conjunction which is for the sense, simply brings into *collocation*; connection, which is for thought in the understanding, requires an intrinsic *coalition*. One is function for cognizing juxtaposition, the other for cognizing an inherent concretion.

Since, therefore, all attempt of an *à priori* exposition by an intuitive process is wholly excluded, the alternative must be to take some media, if such may be found, by which it may discursively be determined how such objective connection may be; or which is the same thing, how an objective experience is possible. Such media must be common to both our subjective constructions of phenomena in the sense and our objective connection of them in an experience, or they can afford no occasion for a discursus from one to the other and consequently no determination of any connection having been effected between them. They must, moreover, be *à priori* conditional for both subjective construction and objective connection in an experience, inasmuch as our determination of such connection in experience is to be wholly *à priori*, and thus necessarily conditional for all objective connection. Only in such manner can any connection in an objective experience be possible. And now, such media may be found in Space and Time. We have already seen that all definite phenomena must have their definite place and their definite period, and thus that all construction of phenomena must be in a space and a time; all subjective

constructions thus must have a space and a time. On the other hand, all objective things and events, as connection of phenomena in an experience, must be in space and time; and thus all objective connection of phenomena must have a space and a time. Space and time are thus common to both a construction of phenomena in the sense, and a connection of phenomena into things and events as experience in the understanding. Space and time are also *à priori*, that is, they are necessary and universal conditions for both construction of phenomena and connection of things, and may thus be used in an *à priori* investigation. And now, the design is to show, in the use of space and time, how it may be determined that constructed phenomena may be connected into things and events in an order of objective experience, and how only this may be done, and which will be the Understanding in its Idea.

SECTION III.

SPACE AND TIME EXCLUDE ALL DETERMINED EXPERIENCE
EXCEPT THROUGH THE CONNECTIONS OF A NOTIONAL.

EXPERIENCE is a determination of the apprehended phenomena to their particular places in one whole of space, and their particular periods in one whole of time. Except as the phenomena are apprehended there can be no experience, since nothing appears in the consciousness; and when phenomena are apprehended, except they be determined to their places in the one space and their periods in the one time,

there can be no experience, for there is nothing connected, but a rhapsody of coming and going appearances with no order or significancy. And now the cognitions of space and time enable us to determine, *a priori*, that no connected experience in space and time can be except as the phenomenal are connected through a notional in the understanding.

1. *The phenomena only may be given, and we may attempt to construct their places in space and their periods in time by them.*—We will show the necessary order of such a process, and that it can not result in any determined experience. When a content is given in the sensibility and this is conjoined into definite figure and period, there will then be cognized a phenomenon occupying a place and period. This first content may pass from the sensibility and other content be given in it, and this in turn may be conjoined into definite figure and period, and known as phenomenon having place and period. Such repeated constructions may go on indefinitely, and so long as the construction which terminates the former shall conjoin itself to the construction which begins the latter, there will be a continuation of place and period, and the particular place and period of the one may be determined relatively to the place and period of the other. Thus, I may construct a rod to the extent of a yard, and then, as that content passes, I may continue to construct a rope of five yards in length, and perhaps still right on may construct a chain ten yards long, and then I can very well determine that the rod, the rope, and the chain together are of such a length, and what the place of each is relatively to the others; and so with the period. In the conjoining movement which constructed the rod there may have been one moment, and that of the rope five moments, and that of the

chain ten moments, and then I can readily determine the period of the whole, and the relative periods and successions of each with the others. Thus may it be with any number of constructions contiguous in place and continuous in period.

But I can not in this at all determine what their places and periods are in the one space and the one time, and thus attain to any ordered experience. They are contiguous and continuous, but in what direction in the one space and what succession in the one time, I can by no possible extent or number of constructions determine any thing at all. If my constructing agency had terminated with the rod, and a chasm had intervened with no content and no construction and thus nothing in the consciousness, when I again awoke in the self-conscious agency of constructing the rope, and then again a chasm and a conscious constructing of the chain, I could by no conjunctions of the sense pass over these chasms and determine direction and distance of places or succession and duration of period between the phenomena. When the conjoining agency ceases, then conscious extension and duration ceases, and all places and periods must stand isolated in themselves and have no determined relationship to each other nor to the one space and the one time. Experience can not so be constituted. And not only in the one space and one time for the self whose agency constructs, but more especially in reference to a common experience among many selves, all constructions of phenomena must be helpless. The uninterrupted constructions may give determined places and periods to phenomena relatively to each other for the subject constructing, but only for him and for no other in common with him. Even while his constructions are in one

place and one period in the continuity of the parts, this is only for him and for no one in communion with him. So *his* phenomena have been, and in his construction of them so *his* places and periods have been, but what phenomena, places, and periods other constructing agencies may have had in consciousness, he can by no conjunctions of the sense determine. His phenomena in places and periods relatively to each other have been for *him*, and others' phenomena in their places and periods relatively to each other have been distinctively for *them*, and neither can say any thing what one has been relatively to the others, nor what all have been relatively to one whole of space and one whole of time. A universal order of experience can never thus arise. So all philosophy that builds up itself on that which is furnished by sense, and stands only in the consciousness, must necessarily proceed. It can give a relative experience so far as perpetuated perception goes, but it can attain to no determination of phenomena in their places and periods in any one whole of space and of time for itself, and much less in any one space and one time in common for all.

2. *The one space and one time may be assumed, and the attempt made to connect the phenomena and determine their places and periods by them.*—The process for such an attempted determination of experience has its one necessary order, and we may *a priori* see that this also must fail in all connection of phenomena.

The cognition of space and time as *a priori* given in the sense, and which we have termed *the primitive intuition*, is that of a diversity of points and instants wholly unconnected and unlimited. It is that which is possible to become conjoined and constructed in limits, but as without conjunction

can be known only as pure diversity of points and instants. When conjoined by an intellectual operation the primitive intuition of space becomes pure figure, and that of time becomes pure period. In the sense, therefore, space and time can give no relationship to phenomena, for they become figure and period only by the construction which gives place and duration to the phenomena. The phenomena, we have just seen, can not determine their places and periods in one space and one time, for they are distinct and isolate among themselves ; and so the primitive intuition of space and time can not determine the places and periods of phenomena, for there is nothing but the pure diversity without and beyond the phenomena.

But because in the understanding, through a process we are now forthwith in the next section to examine, the cognitions of space and time become that of concrete and connected wholes, it may be supposed that the separate and fleeting phenomena, in their distinct places and periods, may be so connected in the concrete one space and one time as to determine an experience thereby. It is thus space and time as given in the understanding, a concrete one space and one time, and not space and time as given in the sense, a pure diversity of points and instants, that we here cognize as the attempted medium for determining an experience.

It is not difficult to think space and time in their totality, and to expound the process of the understanding in so doing. This we will first attend to and then show its utter incompetency for determining an experience in space and time. The cognition of Space as a total of all spaces is attained by a process of pure thought in the understanding ;

not at all by a conjunction of places as in juxtaposition in the sense. A notional connective is assumed as everywhere pervading all places, and in this thought of an all-pervading connective, all possible places are brought into a coalition and made to belong to one concrete immensity of all space. Not a conjoining act, which takes spaces as in the diverse and constructs them into a total space, but an all-pervading connective is thought as already in space, holding it in one universal immensity in itself as conditional that any place may be taken as within space. There can, thus, be no chasm as a void of space around any definite place, as must ever be with all constructions in the sense; but this all-pervading connective of spaces is a universal plenum to space, and therefore all places are held by it as in the one whole of space, and readily determinable in direction and distance each from any other in the one whole. There can be no separation of spaces, inasmuch as the all-pervading connective ever holds space in one whole, and while divisions may appear *in* space, separations can not be made *of* space. The understanding-conception of space is not thus an aggregate of spaces in juxtaposition, but one concrete whole in its all-pervading connective, inseparable and immovable both as a whole or in any interchange of its parts. Such notional connective into one immensity of all space gives to its conception in the understanding but one possible mode, viz., that of *absolute permanence*. Every place in space has its own permanent position, in reference to the one immensity of space and to all other places.

The understanding-cognition of Time, also, as a total of all periods, is attained in pure thought thus. A notional connective as ever-abiding is assumed to hold through all

periods, and thereby making all possible periods adhere together in the one eternity of duration. This, again, is no construction of a whole time out of diverse times conjoined in unity by bringing them in collocation, as in the sense; but the perduring connective of all periods already first holds all times in one Time, in order that any period may afterwards be taken as in the one whole of all time. There can, thus, be no chasms in time as if there were intervals in which is no time, thereby isolating definite periods in their own times, as in the sense; but this all-abiding connective makes one eternity of time, and all possible periods to be in it, and each inseparable from it, and determinable in succession relatively to any other period. Time, thus, can not be sundered, but only things in time can be sundered in their different periods. Time in the understanding is not the conception of single, separate, and fleeting periods; but an ever-abiding, all-embracing duration.

The conception of time as one whole, is not like space restricted to *one mode* as permanence, but has *three modes*, which, as given in pure thought, it is here important should be clearly apprehended. When we take the conception of time in its ever-abiding connective, holding all periods within itself as the same perduring whole of all time, we have one mode of time which may be distinguished as the *perpetuity* of time. When, again, we have the conception of this all-abiding connective holding all possible periods within itself as a series, such that no one can be reached except in the coming and departing of all periods which precede it, we have another mode of time which may be distinguished as the *succession* of time. And, lastly, when we have the combined conceptions of the perpetuity and suc-

cession of time, such that in the perpetual, no period of the successive can be coetaneous with any other period, but that each stands for itself only in the same point of all time, and can thus only be in the same time with itself and not in the time of any other period, we have a third mode of time which we may designate the *simultaneousness* of time. These three, the perpetual, successive, and simultaneous, are all the possible modes of time, and are quite distinct each from each. The perpetuity of time, is the mode of perduring in all periods; the succession of time, is the mode of a progressus through all periods; and the simultaneousness of time, is the mode of a standing in its own position for every period. While in a sense-conception we should say as *fleeing* as time, in the understanding-conception of the first mode we say as *lasting* as time; while, again, in the sense, we have the *alteration* of time, in the understanding as second mode we have the *continuance* of time; and, finally, while in the sense we have the *indeterminateness* of time in the understanding as the third mode we have the *exactness* of time.

And now, with this attainment in the understanding of space and time in their universality, so that all places may be thought as in one time, and thus all places be determinable in direction and distance each from each in the one space, and all periods determinable in their succession and duration relatively to each other in the one time, it may be supposed that thus the phenomena given in sense can be determined to their places in space and their periods in time. And so they might be, if they were but *ideal conceptions* as in our thought of the modes of space and time. When I conceived of a rod, a chain, a rope, etc., as before, I should put

these conceived phenomena in some place of my understanding-conception of all space as a whole, and thus in thought their direction and distance could be readily determined in the whole of all space. And so also in time, I should put the conception of their appearing in some period of my understanding-conception of all time as a whole, and thus their ideal period could be readily determinable from all other periods in my thought of a whole of all time, as whether before or after, and how much in each case. But, this would leave the whole to be subjective merely. It is *my* thought of space and of time as a whole, and *my* conception of the phenomena to be put in space and time, and their places and periods to be determined; and their determination is only ideal and subjective, for myself and with no possible significancy for any other self. In this way no objective experience can possibly be given, determined in space and time.

And, further, should it be assumed that each self has, as understanding-cognition, the same space and time each as a whole; and that it is a law of thought that an understanding working any where should attain to just such modes of space and time;—which must be mere assumption that every man's space and time is precisely every other man's space and time—yet could not the real phenomena, which each man should perceive, be determined to their places and periods in an objective experience. The same space and time would then be for each man, but his perceptions of phenomena would differ, and appear in different places and different periods, and each would have his own world for himself, with no community of common phenomena in the same place and in the same period as others. The appear.

ing of the phenomena would determine all the connections in space and time, and this would differ as the perceptions came and went with every individual. The permanent mode of the one space, for all, could not determine the connections of the phenomena appearing in it, for all; inasmuch as while the phenomena were perceived, the space could not be perceived, but could only be thought. And so with the three modes of time, which it may here be conceded all might have alike, they could not determine the connections of the phenomena appearing in time to be perduring, successive, or contemporaneous; for while the phenomena were perceived, the modes of time could only be thought, and can not be made to have phenomenal appearance. I can determine the place of one phenomenon arising in a lake and then sinking, compared with another phenomenon afterwards arising and sinking, and can tell their bearing and distance; but this is because the lake is itself perceived, and connects and determines the places of the appearance; but such is not space and time as a whole; they are thought not perceived.

While, then, it might be admitted that the understanding in pure thought could attain to the modes of space and time as each a whole, yet could not this possibly avail to connect the phenomena appearing in space and time and determine their places and periods in an objective experience. If all might have, from some inner law of thought, the same modes of space and time, this could not give to them a common experience in perception; for their ideal subjective space and time, though admitted to be the same in all, yet can be perceived by none, and only thought, and can not thus be any media for connecting and determining in their

places and periods, the phenomena which may be perceived by each. It is not necessary therefore to expose the assumption of a universal law of thought that would give to every understanding the same space and time from each one's own pure thinking, which resolves all into an arbitrary constitution of an understanding, and knows no reason for such a law rather than any other, and which involves the teacher of the doctrine in dogmatism and his disciples in credulity; but we may pass it all by, since when admitted, it would be yet utterly in vain for all objective experience.

3. There remains only this other supposition possible, *that perhaps a notional connective for the phenomena may determine these phenomena in their places and periods in the whole of all space and of all time, and so may give both the phenomena and their space and time in an objective experience.* By using the conception of space and time as the media for ascertaining how an experience in space and time may be possible, we have now already excluded the two methods of *Sensualism* and *Idealism*, and found that neither the perception of phenomena, nor the thought of a whole of space and of time, can by any possibility give an experience determined in its connections in space and time. We are thus shut up to the one remaining process of conceiving a notional connective for the phenomena, which shall condition them in their appearance and thereby in their places and periods, and thus determine their connections in space and time objectively. When we have found that neither the phenomenal nor the assumed one space and one time can connect our perceptions into an ordered experience, there is nothing left but a resort to the notional in the Understanding. It is much to have here found the only possi-

ble medium of any determined passage from the sense to the understanding, and to know that if made at all, it must be at this point and in this manner. Perceptions as phenomenal can be brought into philosophical synthetic judgments, and thus into an order of experience, only through the notional.

We will, in the next section, give the method of demonstrating *a priori* such a possible connection, and thus a possible experience determined in space and time; and in this will be exposed all the primitive Elements which enter into the operation of connection, and which give the functions of an understanding in its idea.

SECTION IV.

THE PRIMITIVE ELEMENTS OF THE OPERATION OF CONNECTION, GIVING A POSSIBLE EXPERIENCE DETERMINED IN SPACE AND TIME.

BUT one possible method of connection now lies open. The phenomena must themselves be so connected in their grounds and sources of being, that every perception of them shall be conditioned by this notional ground to its place in space for each, and by this notional source to its period in time for each. It is now the design to show how, in this way, an experience determined in its connections in space and time is possible; and in the process we shall attain the complete operation of Connection in all its primitive Elements.

First, we will attain to a possible determination of experience in *Space*.

Let there be the conception of a *force* in a place, which maintains its equilibrium about a central point and completely fills a definite space, and which forbids all intrusion within its place except in its own expulsion from it, and we will here call that conception of force *the space-filling force*. Its equilibrium every way upon its own center secures that it must remain steadfast in its own place, unless disturbed by some interfering force *ab extra*, and thus constancy and impenetrability are the necessary *à priori* modes of its being. This space-filling force is altogether a notion, and impossible that it should be other than an understanding-cognition, and yet it is manifest that it may be an occasion for phenomena as appearing in consciousness. To the sensibility in an organ of touch it opposes a resistance to muscular pressure, and may thus furnish the content in sensation for comparative hardness or softness, smoothness or roughness, and for figure and motion as yielding to pressure. It may also give content to the sensibility in any other possible organization when the requisite conditions are supplied; as through the light, colors; and through the air, sounds; and through an effluvia of its own, smells; and through a dissolving rapidity, tastes. It can not itself become appearance but thought only, and yet it may manifest itself through a sensibility in all possible quality, and while its mode of being in the understanding is that of a force constant and impenetrable, its mode of being in the sense is that of its perceived quality in the manifold phenomena it occasions. The occasion for its own manifested mode of being in the sense is determined in its mode as given in the understanding, and this, when the

conditions are supplied, to any sensibility that may bring its content within any self-consciousness. It thus determines its own content in all sensibility, as conditioning the constructing agency, and secures its phenomena to be objective in each, and itself as ground, the same object to all. The place in which the conjoining agency must construct the figure of its phenomena in the vision or the touch, is the same in the same self-consciousness at every repetition of the construction, inasmuch as the space-filling force is constant in its place and constant as occasion for phenomenal content in the sensibility; and for the same reasons, the place must be the same to all possible self-consciousness within which the figure of the phenomena shall be constructed. Whether, then, the content, be constantly in the sensibility or not—*i. e.*, whether the eye be constantly in the direction of the object or not, or whether the touch be constantly upon it or not—the constant space-filling force determines the constructed phenomena to be in the same place at every appearance, and for every percipient.

Not, then, as in the sense only, in which every phenomenon must come and depart in its own appearance and disappearance and its own definite figure in place come and depart with it, and thus the places be as isolate as the phenomena, with no possibility of determining them in one whole of all space; but, with the coming and departing phenomena in the sense, we have here the space-filling force which occasions them conceived to be constant in the same place, and thereby determining the appearance to be in the same place, and this same place fixed in its one position in the one immensity of universal space. And, now, it matters not how many such space-filling forces be conceived as each

in its own place, and giving occasion each to its own phenomenal quality in the sense; since all will be in a determinate relationship each to each in direction and distance in the one space which contains them all, and this also for all who shall perceive their phenomena. This determination of the relative bearing and distance of different objects in space from each other still, however, is conditioned on the same conception of the space-filling force being there present. If there be conceived any place in which there is no space-filling force, then in that place there is nothing which may occasion phenomenal content, and as nothing can there be perceived, so it is manifest that nothing of place can be determined. Such a chasm of all space-filling being would necessitate an utter void of all experience, and it could never be determined how broad such chasm is; in what direction from each other the phenomena on each side of it were; nor where in the one universal space such chasm, as a void of all being, was situated. A chasm of all being in void space, of a cubic yard, would as effectually cut off all experience on one side from all determinate relationship to any experience that might be on the other side, as would a void which might receive a thousand suns and their several rolling systems. Whether there may be such voids of all being in space or not, or whether all of being may be circumsphered by such a void space, is not at all affirmed or denied, here, but only this, that a determined experience in space can be possible so far forth only as a space is occupied by a space-filling force, giving occasion in its own constancy of being for constant phenomena to appear in the consciousness. The conception of a removal into a void space beyond all occasions for perceiving a phenomenal universe, would pre-

clude all possibility for determining the place in the immensity of space which that universe occupies. Only as space is filled with that which, as understanding-cognition, is competent to furnish constant occasion for that which, as sense-cognition, may constantly appear, is it possible that any determination of space should be given in experience. Communication from one phenomenon to another, and thus from one determined place to another, can only be thought as possible where a plenum of being in space gives occasion for a continuous appearance from place to place.

In this manner, and in this only, is it possible that experience should be determined in space. A ground must be given in the space-filling notional for the construction of the continued phenomenal, and the space-filling ground will determine all its phenomena constructed in their definite places to be in the same place, and this, occasioning continued appearance, will determine its place in one universal space.

But, it is now manifest that this space-filling force is the constant subsistence in which the phenomenal qualities inhere. The connection is that of *subsistence and inherence*. But this subsisting notional, which in the understanding is constant, is the same conception as that of *Substance*; and the inhering phenomenal, which, though having occasion for a continual appearing, may yet come and go in the sense, and may therefore be quality as accidentally inhering, is the conception of *Accidence*; and thus we have the *a priori* condition, that the determination of an experience in space rests upon the connection of subsistence and inherence, and which necessitates the being of Substance and Accidence. The first primitive Element in an operation of Connection is, therefore, that of *Substance and Accidence*.

We will next examine how an experience determined in *Time* is possible.

All consciousness of time depends upon the modifications of the internal state. Except as changes occur in the inner sense, it must be impossible to apprehend that a time is passing. This capability of the inner sense to be modified lies already as primitive Intuition in the self, and the capacity of the intellectual agency to move over the inner sense and thus modify the internal state, makes it possible that a subjective time should be brought within consciousness and constructed into definite periods. Thus, I may conjoin the primitive diversity in space in unity and thereby construct a definite figure in space, as a mathematical line. The movement of my intellectual agency in such construction would change the inner state, in the passing of the intellectual agency through the diverse points in the primitive intuition of space, and thereby give in the consciousness the apprehension that a time was passing. This, it is manifest, must be wholly subjective, and the consciousness for myself only that a time was passing, inasmuch as it would be only *my* affection of inner state and by *my* intellectual action. Both the definite line as figure in space, and the definite period in time in which the constructing agency was passing, would be of no significancy except in *my* self-consciousness. Every point in the diversity of space through which the conjoining agency passed may be conceived as that which the moving agency successively occupied, and as thus standing in it, each point may be called an *instant* of time; and each interval from point to point may be conceived as that through which the intellectual agency in the construction of the line moved, and which may thus be called a *moment* of

time; the diversity in the primitive intuition of time may thus be considered as instants or moments, according to a conception of the points in the inner state to be affected or a conception of the moving agency from one point to another. As the agency stands in the point it is an instant, as it moves from the point it is a moment; and as each moment is a new modification of the internal state, there is a succession of affections going on in the inner sense, and thus the consciousness of a passing time. So long as my intellectual agency is thus passing from moment to moment a time is passing in my consciousness which I may construct into a definite period; but when my intellectual agency ceases, all apprehension of passing moments must cease, and I can be no longer conscious that a time is passing. If again my intellectual agency pass from moment to moment, and I construct again a definite period, this last can have no determinate relation to the former, for a chasm of all consciousness of a passing time separates them, and it were impossible that I should bring them into any conjunction in self-consciousness. Every period, as subjective time, is thus separate from all other periods, and all determination of any period in relation to one whole of time is impossible. The pure sense can only give its pure periods as separate, and thus the conception of time in it can not be of the one time but the manifold times.

And so also with respect to phenomena in their periods. When any content in the sense is constructed in a definite figure in space, the intellectual agency gives the instants as it stands in the diverse points and the moments as it passes from point to point, as it does in a pure construction, and thus there is the consciousness that a time is passing; and

when this is constructed in a definite period, it is known as the time in which the phenomenon appears in consciousness. But this phenomenon thus constructed is *objective* in this, that the content in the sensibility has not been produced by the intellectual agency, and has only been constructed in its figure in space and its period in time by it. The quality, as real appearance, has from somewhere beside the agency of the self been given to it, and the agency of the self has constructed its form in space and time. Yet, while as real appearance the quality is objective, yet is the space and time in which it appears *subjective* only. It has been constructed in its definite period by *my* agency only and as it has affected my inner sense, and thus its period has no significance except in *my* self-consciousness. When, therefore, I have constructed one phenomenon in its period, and that phenomenon has passed, the constructing agency ceases and thus the internal state ceases to have any successive modifications, and thereby all consciousness that a time is passing becomes impossible. Where some new content in the sensibility is again constructed in its definite period, that phenomenon in its period is wholly separate from the former phenomenon in its period, and the chasm of all possible conjunction of time between them prevents all possibility of determining their relationship in one time. Phenomena in the sense can not be cognized as in one time, but their times are manifold. How, then, may phenomena, in their definite separate periods, be conceived as possible to be determined in their relationship in the universal objective time? And here we answer, as before in reference to determination in Space, that it is possible only as the phenomena are themselves necessarily connected in their relations. How this may be in re-

ference to the three modes of Time, the perpetual successive and simultaneous, must now be explained ; and such explanation completed will give to us the primitive Elements of the operation of connection, and thus complete the Idea of an Understanding. Each mode of time must be taken up separately, inasmuch as the manner of connection between the phenomenal and the notional must in each be different.

1 The *a priori* determination of an experience in *perpetual Time*.—The conception of a space-filling force giving occasion for continual phenomena, and which is substance with the phenomenal qualities inhering, is sufficient for determining a possible experience in space ; but though a necessary preliminary this is not sufficient for determining a possible experience in time. The substance being constant in place, and giving occasion for continual phenomena in that place, is a sufficient condition for determining the bearing and distance in space of any other phenomenon, which may appear as inhering in its substance in its place, and which can be perceived in communion with the former phenomena. Such phenomena will be determined as in the same one objective space, and in their relative positions in that one space. A constant substance as of a star in the heavens, giving occasion for a continual phenomenal brightness in that constant place, is sufficient for determining that any other brightness in its place which may appear in communion with it, is in the same universal space, and the bearings and distance which it has with the first may also be readily determined. But if that substance, constant in its place and occasion for continual phenomenal brightness, never give occasion for any alteration in its phenomenal brightness, all the change that would be possible* to be

effected by it in the inner state would be the modification of appearance and disappearance, *i. e.*, of perceiving and of not perceiving the brightness. When the organ was so directed as to receive the content and construct the phenomenon in space, a time would be apprehended as passing in self-consciousness, but when the content had gone from the sense and no constructing agency was modifying the internal state, all apprehension of a passing time would be impossible. The modification of inner state would be only that of consciousness of a time and that of no consciousness of a time, and this simply as the modifications occurred in the inner state of the subject-self perceiving and then not perceiving. That any such modification of internal state was occasioned by the substance and its phenomenal brightness could never be determined for any other self-conscious subject, but only for the perceiving and non-perceiving subject-self, and hence the passing of any time in the self-consciousness must be *subjective* only. That there was any one universal objective time, which must be the same in all subjects of self-consciousness, could not be thus determined.

But, now, we will conceive that this space-filling force, constant in the same place, becomes somehow so modified inherently as to be occasion of continual phenomenon but yet phenomenon in alteration. The same substance gives occasion now for perceiving one quality as phenomenon inhering in it, and again for perceiving another quality, and thus varying the mode in which the substance manifests itself in the sense. The substance itself thus conditions its phenomena, and the conditioned variations of phenomena condition a modification of internal state, and thus of a passing time in the self-conscious percipient; and this not merely

from the arbitrary attention given by the perceiving self, but must be the same in all perceiving subjects of a self-consciousness. The substance itself conditions the variations in the phenomena perceived, and thus of the alterations of the inner sense and thereby of the apprehension of a passing time, and this for all possible percipients of the varied phenomena; and, therefore, for all possible subjects of self-conscious apprehension of this passing time, it must be the same time and objective to them all. Moreover, this same substance perdures through all modifications, and thus through all variations of its phenomena, and thereby determines them all as they arise and depart still to inhere in the same substance; and they, therefore, are all in continuous connection in their perpetual variations. The period of each varied phenomenon is connected in the one time through which the substance perdures, and thus all the periods of continuous varied phenomena are in the one perpetual time through which the one substance perdures, and this for all possible percipients of these varied phenomena in their varying periods. One perpetual time embraces all the periods which can come up in any experience of these varying phenomena, and thus this substance constant in place is not only space-filling, but perduring through all periods is also a time-filling substance. The determination of any phenomenon in this continuous variation, to its relative period with the periods of all other phenomena in the one perpetual time, is in this manner manifestly possible. Let all phenomena, as they come and depart in continuous alteration, be thought as the varied appearances of the same one perduring substance, and it is possible to determine their whole experience to its proper periods in the one perpetual time, and only in their

connection of phenomena can an experience be so determined.

And now, the connection here is manifestly still that of subsistence and inherence, inasmuch as it is substance and accident still, but this connection is given in a modified manner, not as constant substance and accident, but as perduring substance and varying accident. The qualities inhering in the same substance alter, and thus the substance becomes in the thought *perpetual source* rather than *constant ground* of the phenomena; and the phenomena coming and departing are, in the thought, *depending events* rather than *inhering qualities*. The substance becomes the notion of source, and the accident becomes the phenomenon of event, and the connection is that of *origin and dependence*, rather than as before of subsistence and inherence. We shall thus have the *à priori* element of connection in time to be a modification of the element found in connection in space, and which though still substance and accident, we may distinguish in its modified conception as Source and Event. The *first* primitive Element of connection is, in Space, Substance, and Accident; and this as still the same though modified in the conception is, in perpetual Time, *Source and Event*.

2. The *à priori* determination of an experience in *successive Time*.—The perdurance of the time-filling force, as source for all the varying phenomena which as event depend upon it, would be sufficient for determining all their events in their several periods as occurring in the same perpetual time. The period of one could not be when the period of another was, but the events must come up singly into the experience, and thus be alternate in every self-consciousness.

But with no other conception than that of source and event as element of connection, it would be impossible to determine any fixed order of succession in the one time for all percipients of the events, or precisely where in one progressus of all time the period of any event in our experience was. That the phenomena of fluidity, of congelation, and of vapor, may all be the altered events from one source which I call water, is sufficient to determine that when one is the other can not be, and thus that all must somehow belong to one perpetual time, but if I have nothing further than the conception of the connection of origin and dependence, I can not determine these alternations of events to any fixed order of succession in their period. That the phenomena alternate with each other at hap-hazard must leave the alternations of their periods in an equally indeterminate rhapsody of a coming and departing time, and when all phenomena are thus conceived as simply alternating each with each in their perpetual sources, it were impossible to determine that any experience was proceeding either backward or forward in time, or whether it were not a perpetual oscillation to and fro in time. There is no fixed point in the thought, and thus no determining of period as before and after in a whole of time. All experience, as it originates in one perduring source must be in one perpetual time, but as nothing determines the flow in time and only the alternation of periods, it were impossible to determine any order of succession to our experience in time.

But, if we will now conceive that a modification of the source gives the condition for the alteration of the event, and that this modification has a fixed order of progressus, such fixed order of modification in the thought will necessi-

tate the order in the varied phenomena, and give the capability of determining the flow of experience in time and the relative position of any period in time in which the experience occurs. Thus a substance, as water, may be an abiding source for the alternating phenomena of congelation, fluidity, steam, etc., but if we have the conception of source and event only, and thus the connection of origin and dependence alone, we can never determine from the mere alternations of events any order of progress, inasmuch as these alternations may be desultory, and go from fluidity to vapor or from fluidity to congelation with no necessary connection in the order of the series, though always originating in the same perpetual source. Such alternations of phenomena would condition corresponding variations in the internal state of the percipient subject, and the period of each might be definitely constructed and apprehended as in the same perpetual time from the connection of all in the same perduring source of being; yet these periods could not be determined in one progressive flow, but must conform to the alternating phenomena. There is nothing in the inner sense to determine the order of succession, except as some fixed thought be given as notional connection in the understanding. Let, therefore, the substance, water, be so modified as space-filling by combination with another distinguishable force, as caloric, that the congelation can not appear except under such a given modification of the substance; and thus also with the phenomena of fluidity, and of steam; and at once a fixed order of succession in the phenomena is determinable, and thus also a fixed order in their periods in the inner sense, and the series must proceed in accordance with the progressus of the modifying force, caloric. The percep-

tion of the phenomena must be conditioned by the inherent modifications of their source. The determination of a fixed order of modifications in the thought will determine a fixed order of connection in the phenomena, and thus a fixed order in their periods and thereby a progressive flowing on in time. Some standard, as a perpetual on-going of modification of substance in the thought and of corresponding phenomena in the perception, must be taken, and it will render determinable in time the period of all possible varying phenomena that may be held in communion with it. If the series can only be a *prograssus* and never a *regressus*; as, for example, in the modifications of the expressed juice of the grape, through the saccharine, vinous, and acetous fermentations; or the order of the seasons; then an order of successive time may be determined, and all possible periods in which the phenomena may appear may be determined in their relative positions in this successive time, but impossible in any other connection.

This connection is that of *efficiency and adherence*, inasmuch as the modification of the source makes the variation of the phenomenon, and this as event is not mere sequence but necessary result as dynamical adherent. The substance thus is not mere source for an event, but an efficiency is thought to be in it which necessitates the kind of event, and thus the source becomes the exact conception of a Cause and the necessitated event is the precise conception of an Effect; and we have thus, as condition for determining phenomena in successive time, a *second* primitive Element of connection as *Cause and Effect*.

3. The *à priori* determination of an experience in *simultaneous Time*.—The connection of origin and dependence

in the notion of source and phenomenon of event is sufficient for determining phenomena in perpetual time, and the connection of efficiency and adherence in the notion of cause and phenomenon of effect is sufficient for determining phenomena in a successive time; but quite another element of connection must now be attained for determining phenomena in simultaneous time. The modified source as cause makes the event to be what it is as an effect, and as the modifications in the source proceed, such also is the necessitated succession of effects; and as these phenomenal effects must modify the inner sense in the perception of them, so the periods of their appearing may be constructed and must be thought as in a fixed order of succession in time. But any number of such series of cause and effect may be conceived as passing on each in its own fixed order of progressus, and when the perception of these phenomenal effects is promiscuous from one series to another, it will be impossible from the connections which only run up and down the separate series to think any connection in communion each with each, and thereby to determine that any of the phenomena in each are contemporaneous, or, as the same thing, are in simultaneous time. Each can be determined to its position in its period according to the connections in its own series, for the thought has fixed the order of the progressus in that direction up and down the succession, but no one series has fixed any order of progressus in another series, and it can not thus be said whether one event in one is before or after any event in another series. The thought has no fixed connections athwart the series, and it is therefore impossible to determine the period of one in its time as having any relation in time with the period in another. Thus, I may have

different modifications of the substance, water, giving the varied phenomena as successive events of congelation, fluidity, and steam, and when I think them as connection of cause and effect in a necessary order, I may determine the periods of each effect in their appearance in successive time. And, again, when I have the varied modifications of the substance, caloric, in the successive temperatures of cold, agreeable warmth, and hot, and think them in connection as cause and effect in a necessary order, I may determine the periods of such effects in my experience in successive time. But if, now, I can think no connection between the ice and the cold, the fluid and the agreeable warmth, the steam and the heat, I can never determine the contemporaneousness of either, because I can only determine the period in each in their own successive time, but not at all determine the periods in each to be simultaneous.

Let, however, the conception of reciprocal modification be here entertained, so that the substance, water, modified by the caloric successively as cause for the effects of ice, liquidity, and steam, also modifies reciprocally the substance, caloric, as successively cause for the effects of cold, agreeable warmth, and heat; and thus, that while water as modified by caloric is the source of congelation, caloric so modified by water is the source of cold, and thus on reciprocally through all successive effects in each: we shall thus, from this reciprocity of modification, determine a necessary connection of effects in each, and that the period of the one must synchronize with the period of the other, and that the phenomena of the ice and the cold, the fluid and the warm, the steam and the hot, must be together simultaneously each with each. The series of effects, and thus their periods in

time, are connected as concurrent and concomitant, and the determination of the coetaneous in time is as readily made as before of the perpetual or successive in time. If every event in its series is not thus connected by a reciprocal efficiency with every other concurrent event in its series, it were wholly impossible to determine them to be contemporaneous. All effects must be held in communion by a reciprocal efficiency, as necessarily as in succession by a direct efficiency.

And now, this last species of connection is that of *reciprocity and coherence*, inasmuch as the efficiency each way makes a mutual variation of the phenomena, and these as effects are not merely adherents as successive but coherent as in communion. The conception, therefore, of such reciprocal causation is precisely that of *Action and Reaction*. This is the *third* primitive Element of connection.

Through the media of Space and Time we have thus attained all the primitive elements of connection, and which must be that of substance and accident having the connection of subsistence and inherence for determining an experience in Space; and which, for determining an experience in Time, becomes modified into source and event, having the connection of origin and dependence for perpetual time; into cause and effect, having the connection of efficiency and adherence for successive time; and into action and reaction, having the connection of reciprocity and coherence for simultaneous time. No cognition of an experience determined in space and time can be, except as the phenomenal in the sense is thought to be connected according to these primitive elements as the notional in the understanding. The operation of connection must, therefore, be uni-

versally conditioned upon the notions in an understanding of Substance as ground in space, and of Substance as source in time; which last, as modified for succession, becomes Cause; and again modified for concomitance, becomes Reciprocal Causation.

SECTION V.

SOME OF THE A PRIORI PRINCIPLES IN A NATURE OF THINGS.

As conditional for all determination of objects in Space and Time, the phenomena must inhere in their permanent substance, depend upon their perpetual source, adhere to their successive causes, and cohere by their reciprocal influences. It is not possible that the phenomena of the sense can be determined in space and time except as they are thus connected among themselves, and thus condition the order of their experience in the understanding; and wherever there is such a determined order of experience, there must be real phenomena standing in their valid substances causes and counter-influences, and constituting through such connections a systematic and organized whole of things which we properly term, as distinct from all ideal connections in our subjective thinking, an objective world. Separate and fleeting appearances are connected in their sources as events, and in their reciprocities as concomitant occurrences, and this every-way connection in our experience gives a *nature of things*, and considered as a whole of all such connected things we term it *Universal Nature*.

This is the province of the Understanding, to take the perceptions of the sense and determine their connection in a judgment of a nature of things; and except in such field of operation it is impossible that an understanding should effect any judgments. If there may be existence which is not subjected to the space and time-determinations, and not bound in the connections of substances causes and reciprocal influences, it must be held as utterly without signification for an understanding which can operate only in the connections of the phenomenal through the notional. The supernatural is as nothing for an understanding judging according to the sense. It would be as preposterous to put the understanding to the work of determining the supernatural, as to put the sense to determining substances and causes which are wholly supersensible. If we have no faculty which may transcend the cognitions given in an understanding then, truly, must we be ever shut up within nature, and that any existence may lie beyond nature must be wholly inconceivable.

But this whole field of nature, as of the conception of phenomena connected into a universal whole of all possible experience in space and time, is the legitimate province of the understanding, and all that is possible to be known of it must be contained in such discursive judgments. Having now attained the process for all such judgments through all the different methods of connection which are *à priori* possible in an experience determined in space and time, and thereby explained how it is possible to verify the synthetical judgment in its addition of a new cognition of the notion; we may further take the conception of such verified judgments, and by an *analysis* of their conditions we may find

many predicates for an analytical judgment, which will give to us so many necessary and universal principles as conditions in a nature of things. This we will now proceed to accomplish through each of the connective notions made use of in their methods of discursive connection, viz.: the *Substance*, both as ground and source; the *Cause*, as conditioning changes; and the *Reciprocal Agency*, as conditioning concomitances.

1. *Substance*.—This, we have found, is a notion wholly supplied in the understanding; impossible to be reached by the sense; standing under all phenomena as their ground or source; and yet which may be verified as objective being and not mere subjective notion, from the determination in space and time which it gives to experience. As pure conception in the understanding it is ground for all quality and source for all event; and as verified in a determined experience, objectively, it is a space-filling force in its ground for all perceived quality, and a time-filling force in its source for all changing events. As no construction can place it in the light of consciousness, so no immediate intuition can take cognizance of it; but through the media of space and of time, it has been *à priori* found to be a necessary condition for all determination of an experience in the relations of space and the relations of perpetual time; and, therefore, wherever an experience determines itself in its relations in a whole of space, there must be a space-filling substance as permanent ground for the phenomena which appear unchanged in the same place; and wherever an experience determines itself in its relation to one perpetual time, there must be a time-filling substance as perduring source for the changing phenomena there occurring.

And here, if we will take the conception of this verified objective space-filling and time-enduring substance, and analyze it as connective notion for qualities in one space and events in one time, and thus standing as the substantial essence and thing in itself of material nature, and of which all perceived phenomena of quality and event are but the modes of its manifestation through the different organs of the sense, we shall in such analysis be able to find many *à priori* principles of nature, as the analytical elements and conditions without which a nature of things as given to an experience determined in space and time can not be.

Let us, then, take the conception in the *first* place, of substance as *space-filling*, and find the analytical content which must belong to it. Our analysis must be of that which is wholly supersensual, and not at all phenomenal but notional as the transcendental ground and condition for all phenomena; and thus, an indispensable prerequisite to such analysis is a distinct conception of this understanding notion of a space-filling force. All conception of force involves action, but a mere pure act does not give the conception of force. Action in one direction, meeting no other action, could have nothing answering to the conception of force. Except as action meets action and thereby counter-action takes place, no generation of force is conceivable, and hence all conception of force is truly that of a product from an antagonism. It is not original pure act, but the resultant of pure counter-action. At the point of counter-agency, as pure notion in the understanding, shall we first attain the conception of force as pure understanding-conception. Such a point becomes an occupied position in space and resisting all displacement, and to the extent to which the diverse points in a space are contig-

uously thus occupied by pure forces is there a filling of space, and a resistance to all foreign intrusion within such space. And here, with this conception of pure force as occupying a space, we have all that is now necessary to be considered as sufficient for the pure understanding-conception of a space-filling substance. This pure space-filling force, as thing in itself, can not appear in the sense, but may very well be occasion that there should be phenomena in the sense. It may readily give content in the sensibility, and thus occasion different affections which may be both distinguished and conjoined, and thus become distinct and definite phenomena. To the sensibility of the touch and muscular effort, it may give content for the phenomena of resistance, figure, superficial smoothness or roughness, hardness or softness, and weight or pressure, etc. And so, also, through the intervention of other media it may give content to vision; to hearing, smelling, or tasting; and this in all possible ways of such organs of sensibility becoming affected, according to the modifications internally of the space-filling force. The phenomena are thus the modes in which the one space-filling force manifests itself through the perceptions of the sense. This permanently fills its space, and stands in its position, and is constant occasion for the like content in all organs of all sensibilities. It thus must determine its own place, and its relation to all other space-filling substances in their places, and become objective experience as the same thing in its place for all occasions when its phenomena are perceived, and for all subjects of the self-conscious perceptions.

If we had only the vague conception of substance and of cause as somehow standing under the qualities and be-

tween the events, we could not make any intelligible analysis of them, nor attain any *a priori* principles of nature from them. But the clear conception we may gain of force as of two counteracting activities, and the modifications that must occur when forces interfere with each other, lays open before us the whole intrinsic nature of substances and causes. They can not be constructed and thus be immediately beheld as mathematical figure, and therefore no analysis of them can be intuitive; but they can be clearly thought, and such thought may have its complete analysis, and such analysis will give necessary principles in nature.

And now, with this pure understanding-conception of the space-filling substance, it is quite manifest from a mere analysis thereof, that a permanent *impenetrability* must belong to it in the space which it occupies, and that this will be a valid index in the sense, that a space-filling substance occupies the place into which the phenomena of another substance can not be introduced without a displacement of the phenomena already there appearing. The principle of impenetrability must thus belong to a nature of things, and the conception of such impenetrability must be essential to the conviction that any phenomenon has substantial objective reality. The empirical determination of substance to its place may be thereby effected when an impenetrability is perceived in that place, and the sameness of a substance may be determined for the sense when the same phenomena are occasioned from the same impenetrability.

And so also *inertia* must be a first principle in matter. The antagonisms which constitute the force in each point of space filled balance each other, and are thus at *rest* from this mutual *resistance*, and so the matter must remain at *rest*

except as impelled by the impact of some other material force. When thus impelled the antagonisms have a greater energy on one side, and must therefore move before this greater energy and in the direction from it, and so the matter must continue to move till some outer material force be met to restore the equilibrium of the antagonist energies. *Inertia* is not inaction intrinsically, but intrinsic antagonist action self-balanced. The matter holds itself in its given state as a *vis inertiae*.

And again, that *infinite divisibility* is an *à priori* predicate of all material substance is clear in an analytical judgment. The space-filling force is a point in the antagonism of a pure counteraction and has thus, as the mathematical point it occupies, position only and not magnitude. And the entire space filled by the substance is so filled only, as every point in the space is position for the point of an antagonism engendering force, and thus the substance is as divisible as the space which it fills. It is also manifest that the intensity of the counteraction is the measure of the force engendered in every point of the space filled, and therefore that the same space may yet be filled, while the quantity of the substance filling may differ in an infinite degree. Every point in the space may have its occupying force, and the intensity of the force may be from the point $=0$, onwards to an infinite amount. Substance is thus divisible without limit in two ways; in the extent of space filled, and in the intensity with which the same space is filled. The atom of matter is thus no possible phenomenon in the sense-conception, but a notion in the understanding-conception. It is the force engendered in one point of pure counteraction, and while it may occupy space merely as simple position with-

out extension, it yet may be of an infinite diversity in its intensity, and thus some one atom might have an intensity which should equal the aggregate atoms of a world. Not only infinite divisibility as diminution of space filled, but also infinite divisibility as diminution of intensity in the same place, may be *à priori* predicated of all material being; inasmuch as an evanishing in the same place may as truly pass through infinite degrees, as a dividing of the place may pass through infinite limits. In this respect, space and substance differ in the thought: space is divisible only as extent; substance is divisible both as extensive and as intensive.

We may also, in the *second* place, analyze the conception of substance as *time-filling*, and determine some of its *à priori* principles in this direction. This same space-filling force indicating itself in its constant impenetrability, may be conceived as giving its content to the sensibility, and in this manner its phenomena to the perception, and these as changing in their definite places, or as themselves changing in the same place; and in either case a filling of time will be determined. The moving of the phenomena from place to place in the perception must affect the inner state, and thus induce the consciousness that a time is passing; and this may be conjoined into its definite periods, while the constancy of an impenetrability in the changing places of the phenomena will give a perduring substance through all these changes, and thus determine these definite periods to be in one perpetual time. Or, the changing of the phenomena in the same place must also affect the inner state by the perception, and thereby induce the consciousness that a time is passing; and this may be conjoined in definite periods, and the constancy of the impenetrability will give the same sub-

stance as permanent source for the changed phenomena, and thus determine the definite periods to stand in the one perpetual time. In either case, therefore, the permanent substance perdures through a time, and is thus time-filling.

And now, inasmuch as the perpetuity of the one time is determined only by the perdurance of the one substance as source through all its changes, and that as the one time endures so the one source of all changes of phenomena must endure; it follows, that the understanding can admit of nothing which is new to come into its conception. That which arises and departs is the phenomenal, and is new only as a sense-conception; but it has come up from some perduring source, and when it has departed there has not been a void left in the understanding, for the substance still is, as the constant source for new phenomena; and thus, for the understanding neither a coming nor departing can be, but a perpetuity of things endures. Origin from nothing, and extinction in nothing, are both inconceivable. It would be a void of all being before and after the phenomenon; or, a chasm of vacuity between phenomena; which would cut off all possible connection in the determinations of the understanding, and in the admission of which the understanding would annihilate its own functions. Neither nature nor time could be thought in their unity, nor that nature had any determinate position in time. This is, therefore, an *a priori* principle of nature—that no change of phenomena can arise from non-being, and vanish again into non-being, but must ever originate in some permanent source, and depart with that source still perduring. The old dictum of the ancient philosophers is peremptory, viz.:

“*Ex nilo, posse nil gigni;
In nilum, nil posse reverti.*”

Whether substance itself may begin, and thus the creation of a thing in itself be effected by that which is free personality and not a thing, is a question for quite another faculty than the understanding. So far as an action of the understanding can reach, it must be by bringing phenomena in discursive connections through the medium of the notional, and it were as absurd to attempt thinking phenomena into a nature of things without a permanent substance, as to attempt perceiving the shapes of phenomena without place. The conception of the substance as notion in the understanding is conditional for all function of an understanding; and of course the inquiry, whence is the permanent substance? must transcend all action of the understanding as the faculty judging according to sense. The substance, as space-filling force, verified in the determination of an experience to the space-relations, and the substance also as time-filling force, verified in the determination of an experience to the time-relation of perpetuity, being given, the understanding may use it for connecting a universe of nature in the immensity of one space and the eternity of one time; but, when it would transcend connections through this substance, and inquire for an origin of the substance itself, it is abolishing the very notion which determines the immensity and the eternity in their oneness, and obliging itself to think another substance in another immensity and eternity, of which this system of nature in its space and time is but a modification. It is an understanding attempting to overleap itself by issuing its agency outward into some higher understanding, and could even thus only employ itself in an

endless leaping from sphere to sphere, without the possibility of resting in a final landing-place.

The perduring source of these changing phenomena is conceived to be before the first phenomenon, and to continue still in the departure of the last, and thus to hold all the phenomena within one perpetuated duration, and neither beginning nor ending nor at all exhausting itself in any of these perpetuated successions. The substance persists through all modes of its manifestation without beginning or end, augmentation or diminution. The force in one point may be modified by any combination of forces in other points, but the space-filling force once given, its modifications in any part can only occasion new phenomena in the sense, not any creations of new nor annihilations of old substances. It is thus an *a priori* principle of Nature, that within itself *nothing is created nor annihilated*; but itself remains the same whole through all its transformations. If any thing may be added to it, or taken from it, it must be by some *ab extra* interference; and is, of course, the introduction of some supernatural agency which can have no conceivable significancy in any Judgment of the Understanding.

And this conception of the permanency of the substance of nature, and the coming and departing of the phenomena of nature, discriminates between some other conceptions which are often confounded. The conception of *change* is that of any modification in the permanent substance; the conception of *alteration* is that of the departing of one phenomenon and the arising of another; and the conception of *variation* is that in which one phenomenon is made distinct from another. Thus the permanent substance *changes* and

thereby *alters* its phenomena, and these phenomena *vary* one from the other. There can be no change but in a permanent which neither alters nor varies. We may change the mode of the same thing, alter one thing for another, and vary different things among themselves.

We have also in this the conception of *chance*. It is the origination of phenomena from no permanent source. It is no positive judgment, but a negation of the connective conditional for all judgments, and assumes an origination from a void of all being. It is the absurdity of thinking through the sense; of discarding the notion and thus vacating the understanding, and yet attempting to account for the connections of phenomena. It is a negation of the law of thought itself, and thus such an experience of nature is an absurd and impossible conception. A Nature of things can not admit of Chance.

2. *Cause*.—This we have already found to be a primitive Element of connection and thus a primitive understanding-cognition, wholly supersensible, and yet possible to be verified as objective being in the determination of an experience to successive time. We shall find a clear conception of cause to admit of an *à priori* analysis, which will give the predicates of a nature of things in an analytical judgment in several important particulars; and which, as involved in the connections of nature itself, must be the necessary and universal principles and conditions of a nature of things. The first requisite is, the attaining of a clear and complete conception of Cause. No construction is possible that it may be given in a definite intuition, but its conception must be wholly within the thought of the understanding.

When we recur to our conception of substance, we have a force in every point of space which the substance occupies, and is thus space-filling; and a perduring through every instant of time that, as source for coming and departing phenomena, the substance continues and is thus time-filling. This substance, as time-filling, is the conception of a modification of the internal space-filling force so that as thus modified it becomes occasion for an altered content in the sensibility, and consequently of an altered phenomenon in perception; and we say that the same thing has become changed. But, manifestly, this space-filling force as substance will hold itself at rest in each point of its antagonism from the constancy of the balanced counteraction, and thus nature will hold itself in utter immobility and which is its *inertia* throughout, if the force in one portion of space does not intrude upon the places occupied by other forces; or, which is the same thing, if one substance does not become combined with, or make an impulsion upon another substance. When such cases occur, the combination of forces must work an inner modification of the antagonism in each point of counteraction, and thus necessitate altered contents for the sensibility and consequently altered phenomena in the perception, and we shall have *chemical* changes; and the impulsion of the forces must modify the intensities of the points of counteraction, and we shall have *mechanical* changes. In all such modifications of forces as space-filling, while the perduring impenetrability will indicate the substance which is the permanent *source* of these altered phenomena, yet will that substance which obtrudes its modifications upon this permanent source be a distinct conception; and it is this obtruding of one space-filling force upon an-

other in its modifications which, precisely, is the conception of *cause*. All physical cause implies a duality of agency. Thus the permanent substance which we conceive to have been constant in all the alternations of congelation, fluidity, vapor, etc., we conceive as the *source* of these alternating phenomena; but the substance which has obtruded itself in its modifying force, and thus produced the changes in the permanent source, we conceive as the *cause* of these alternating phenomena. The substance, caloric, is combined with the substance, water, and thus as one space-filling force so modifying the other space-filling force, that in its various modifications the caloric is cause and the water is source now for congelation, again for fluidity, and again for vapor, etc., as chemical changes; and the ivory of the billiard-ball at rest as space-filling substance has been so modified in its intensities of counter-agency at each point in the space it filled, by the obtrusion of the ivory of the moving ball upon its place, that the first has become source of continual displacement in the resulting movement, and the last has been the cause of such movement, as mechanical change. Thus in all cases of causation, the conception of a cause is that of a space-filling force as one substance obtruding itself upon the place of another space-filling force as substance, and by the modifications induced securing chemical, mechanical, or other changes in the latter, which manifest themselves to the sense in the altered phenomena.

It is, therefore, clearly involved in the very conception of a cause, that as the changes induced in the permanent source by the modifications of the cause pass along according to the conditions of the combination of the substance-cause with the substance-source, so the altered phenomena

springing from these changes in their substance-source must pass on in the same conditioned succession. The modification of the source by the cause is the condition for the altered phenomena, and this alteration of phenomena must correspond to the changes in the source. The perception can, therefore, be but in one order, and this conditioning of an ordered series of perceptions is an index of an ordering series of causation. When the phenomena in their successions in the sense can be perceived in one order only, and not the reverse, then it is that an ordered series of changes is going on in the substance-source as conditioned by the combination with it of the substance-cause; and in this may we determine an objective succession as distinct from mere successive appearance in the subject perceiving. There is in this an alteration of phenomena, and not a mere succession of perceiving acts.

Thus, when in a hemisphere of the heavens, I perceive one star in succession after another, and as one passes from my sight another comes into vision, the perceiving agency is as truly successive and may be constructed into its definite periods as completely as if one star had been the condition of my seeing the next, and thus on through the whole series. Merely such a succession in perceiving will determine nothing in relation to an objective succession in the phenomena themselves; but if I find I may reverse my order of perception, and see the same stars successively in a retracing of my series of perceptions, I then know that not the stars themselves are successive, but only my perception of them. But if I follow my perception of the tides as ebbing and flowing, and thus at any one point as rising and falling successively, and I can not perceive in an inverse

order that the water is either rising or falling at pleasure ; I then determine that it is not a mere successive perceiving, but an objective succession in the phenomena themselves. And in this objective succession of phenomena, I shall have an index of a conditioning series of causes. And here, that I may determine the cause and the source of these successive phenomena, I must be able to determine the objective reality of their substances, and in these, which is the cause and which is the source. I may very readily determine a perpetual impenetrability in the rising and falling water, and know that to be permanent source for the flow and ebb of the tide which appears ; but it may be much more difficult to determine that the force of the revolving moon modifies in combination with it the space-filling force of the substance water, and thus *makes* the latter to be source for the ebbing and flowing tide ; and yet except as I have so determined, though I may have determined that there is causation, yet have I not found what is the cause. I may very readily determine that the phenomena of saccharine, vinous, and acetous fermentation are objective alterations and not merely successive perceptions, for I can not vary the order of the perceptions ; and I may also determine the source of these altered phenomena of the sugar, the wine, and the vinegar, by determining a permanent impenetrability constant in one substance through them all ; and though I have thus clearly determined that this substance-source must stand in combination with some substance-cause and be modified thereby, yet it may be impossible for me to determine what that permanent space-filling force in its perpetual impenetrability is, which is the substance-cause for these changes ; but until such is found, though some cause must be, yet what the cause is has not yet been determined.

That a cause is, has a safe index in this—an ordered succession of phenomena perceived in a determined series; *what* a cause is, must be determined in this—a perpetual impenetrability that marks the substance, which by combining with the substance-source of the phenomena modifies its changes, and thus conditions its successions of phenomena. One space-filling force can not impinge upon or combine with another, without so modifying it as to induce some changes in it, which must manifest themselves in the sense by some alteration of the phenomena, and this competency to so induce changes is the essential of causality, and which we term the *power*, or the *efficiency* of the cause, and which is the *causal nexus*, as notion in the understanding, for connecting the successions in the phenomena. If, then, we sometimes find the phenomena in the substance-cause and those of the substance-source to be together: we shall still determine that to be cause in which the efficiency is, and cognize it as necessarily first in the understanding-conception, though both may appear together in the sense. Thus I may first perceive a vapor, and then perceive a heat as phenomenon of the notional caloric which causes the vapor; and though I may perceive that the heat and the vapor are together in the sense, yet inasmuch as I determine the efficiency to be in the caloric of which the sensation of heat is phenomenon, I judge the heat to be truly first in order and the vapor to succeed it. And so, moreover, when I simply perceive varying phenomena in some source, but can not perceive any phenomena of the substance-cause, the determination that there is an efficiency inducing these changes in the source is quite sufficient that I should judge some substance-cause to be present, although it does not manifest itself by any of its

own phenomena in the sense, but only to the understanding through the changes which it is effecting in the source of these coming and departing phenomena. Thus, I may perceive the altered phenomena which magnetism is effecting in some substance-source, as the movement and disposition of the steel-filings after an ordered arrangement; and though no phenomena mark the presence of the magnetic substance in the place where the steel-filings have been arranging themselves, yet my understanding at once concludes that some permanent space-filling force is present, and that the sharpening and perfecting of some organic sensibility might be sufficient to receive its content as a sensation, and capacitate the intellect to discriminate and construct it into a complete phenomenon. In my understanding, I therefore conclude magnetism, and so also electricity, galvanism, and even gravitation, to be space-filling forces, although they manifest themselves to the sense in no other way, than by the altered phenomena which they produce in other substances.

The efficiency in any substance-cause may be conceived to lie in the substance as an inherent property, even when it is not in combination with any other space-filling force as actually inducing changes therein, and it is such conception that we mark by the term *latent power*, implying that it would induce changes were the occasion given for its combination with some other substance. We thus conceive the steel and flint as possessing the latent power to produce the spark, though no occasion of collision has occurred; yet ought we not to hold such notion of latent power to be that of cause, but only that on occasion of their combination in collision, there would be cause, viz., a modification of the

space-filling force. The steel and flint are no more cause for the spark than a chip and leather, except as brought in combination ; for without this the phenomenon of the spark can no more appear in the sense from one than from the other.

An analysis of this conception of Cause will also expose some important distinctions in reference to occurring events which are often very confusedly apprehended. Thus, when I conceive of a series of causes and effects passing on in their order, and some phenomenon extraneous to this series and not at all accounted for in it comes suddenly in, and interrupts the process of thinking in its connections as going on in the experience, I term this intruding phenomenon a *casual* event, and perhaps, as if surprised by it, I say, it somehow so *happened* ; or, that it was an *accident*. The meaning is, not that any such occurrence has come without both its source and its cause as space-filling substance, but that its connection is quite in another series of cause and effect from that which we were then determining in an experience, and in proportion to the suddenness, supposed disconnection, and difficult explanation of the intruding phenomenon is our surprise, and the mystery in which we leave the casual occurrence.

When we follow the conception of connected phenomena in one *source* through their successions, as of the juice of the grape through its successive stages of fermentation, we have the judgment of a *change in things*. When we follow the conception through the successions of a series of *causes*, we have the judgment of a *train of events*. Thus, in the return of the sun from the winter solstice, and the dissolving of the snow and ice, and the overflow of the streams, and the deposition of organic remains upon the

fields, and their increased fruitfulness, and the augmented business, wealth, population, etc., we have a successive *coming out* from different sources of new phenomena which we term *events*; and these are all conditioned in their order of occurrence by their series of causes, and we therefore say, that they occur in a *train*. These successions have no connection in one source, but the phenomena vary the substance in which they originate with every step, and their connection is only through a varied combination of substances, of which one becomes an occasion for the next, and thus onward through all the efficiency of the changes by their causes. And again, when we conceive the antecedent not as the efficient, but only as a preparative occasional for an efficient, we may deem both the occasional and the efficient to be causes, but their distinction in the conception must be noted by some qualifying phraseology. Thus in the overflow of the streams as following the dissolving of the snow, the dissolving is only a preparative occasional for and not an efficient for the overflowing. The disengaging of the fluid by the dissolution of the congelation prepares the way for the efficiency of gravitation to come in combination and produce the overflowing; and then this overflowing is again a preparative occasional for the deposit of its sediment, inasmuch as the quiet state of the waters which ensues permits again gravitation as an efficient, to bring the suspended particles to the bottom. We may mark this distinction by calling the one *an occasional cause*, and the other an *efficient cause*; and in many cases such distinction leads to very important philosophical consequences. The old scholastic distinctions are not unworthy of careful pres-

ervation ; as *causa causans*, *causa causata*, *causa efficiens*, *causa sine qua non*, etc.

This clear conception of Cause gives opportunity for a further analysis, by which still more important *a priori* principles in a nature of things are determined. The conception of *fate* is that of a cause in utter blindness ; competent to originate effects, and yet utterly without determination of what the effect must be. It is a blind giant in its power, irresistible and inexorable, under which, the doctrines of the Stoic become the highest wisdom, viz., that there is nothing to pray for and nothing to pray to ; nothing to be feared or hoped ; and the part of virtue is to receive all things in perfect equanimity, inasmuch as while something must come, there can be no possible conditioning of what is to come. The cause is positive, but all conditioning of the effect in the cause is negative. The understanding has simply the connective of efficiency, and therefore it may determine that one thing shall make changes in other things, and successions of phenomena shall flow on ; but it has no connectives for judging what changes shall be induced, and thus no determination of what phenomena must appear. But if we will here analyze our conception of cause, we shall find a nature of things no more admitting of Fate than, as above seen, of Chance. The space-filling force as substance in a nature of things already is, and the conception of cause is the efficiency of one substance in combination with others to induce changes therein, and thus condition the phenomena which must appear in the sense. But the given combination, from the inherent forces of the space-filling substances as cause and source, can produce only a given modification, and thus a given change, and thus also a

given phenomenon; and every change must also be conditional for its next combination of substances, and thus onward in endless development, but with the inherent principle in every succession as an intestine law of what every subsequent succession must be. In nature there can no more be a blind fatality of result, than there can be a resting of causation. Both the cause must go out into effect, and must go out in such effect, and the whole is given in the germ as truly as any part in the past development. Causation has its connections in intelligible inherent law, and knows nothing of a blind Fate, which would annihilate all function of an Understanding in Experience.

Again, the conception of *liberty* is that which may propose to itself as cause an alternative of ends, and go out in its agency-for the one in the possession of an efficiency for its alternative. It is positive of agency and positive of conditions, but as having an alternative of conditions it is negative of a necessitated order of effect. But in the causation of nature an alternative of conditions is an impossibility. No combination of space-filling forces can induce but one modification in any point of efficiency, and the cause must as necessarily go out into its own conditioned effect, as it must go out in effect at all. In Nature there can be no Liberty.

And, lastly, the conception of a *leap* in nature would be that of passing from effect to effect without an intermediate efficiency, and thus in one stage of development reaching an advanced position without passing through the intermediate changes. Such a conception would break up all intelligible connection in nature, inasmuch as any cause which was efficient for other than its own effect must leave all intermedi-

ate effects unconnected by any cause. Nature would have some changes which were not connected in any development of nature. A nature of things can never admit of progress *per saltum*.

3. *Action and Reaction*.—This is another pure understanding-conception, and may be verified in an objective reality by the determination of an experience as cotemporaneous, or as occurrence of events simultaneously. A clear conception of this manner of connection will also give occasion for a further analysis by means of which some other *a priori* principles of a nature of things may be obtained.

The conception is that of two substances in combination or collision, which can not occur but it must modify the space-filling force through every point of the space filled. But while such modification must be made in one substance from the combination, the combination must as surely modify the other substance, and thus the change must be reciprocal. And this is not merely in single instances of combination, but inasmuch as all of a nature of things may be determined in the relations of one space and of one time in experience, it follows that all things as coexisting in space and time must stand in this reciprocal intercourse and communion each with each. Were some one substance isolated from all reciprocity with all other substances, it could not be determined as in the same universal space and time with other things, and thus could not stand connected in the same experience.

This mutual commerce between all portions of the co-existing universe gives the occasion for perceiving the phenomena of different substances in one order and then in a reverse order of perception. If, when the perception of

one phenomenon had passed, the phenomenon could not again be repeated in the sense, it would indicate that the modification in the substance which occasioned it had also passed, and a change had been induced which must now give occasion for the perception of some other phenomenon, and such succession would indicate that the connections were those of cause and effect, and could not admit of reversed perceptions, inasmuch as all occasion for the preceding perception had wholly passed away. But when the apprehension of one phenomenon has passed and another has been apprehended, and then the apprehension of the first may be again repeated at pleasure, it manifests that the occasion for such phenomenon remains, and the order of apprehension each way is the index that the connection is that of reciprocal influence, not of cause and effect. When, therefore, all co-existing things reciprocally influence each other, such influence gives occasion for the same phenomena in each, so long as the modifications of any one does not make its changes in all. Thus, when the presence of the sun acts and re-acts in the modifications of its light upon all, my perception in the organ of vision may be from one co-existing substance to another, in the phenomena thus occasioned, and in a reversed order of apprehension arbitrarily, and I determine them as contemporaneous; but when the sun is withdrawn and such action and reaction ceases, and such modifications have passed away, and I can no longer pass in my apprehension from one thing to another, I can no longer determine their contemporaneousness, but only the successions that have passed since they all disappeared.

With this conception of the reciprocity of influence throughout nature, and that no one thing can be changed in

its modifications but it has been acted upon by all, and that thus one portion of nature acts through every other portion while every other portion is also acting through it, we have the analytical judgment *a priori*, and thus a primitive principle of nature, that it can be no *aggregation* of particular things which are merely in apposition in space; nor yet a mere *concatenation* of various series of things, in independent lines of cause and effect; but that while all have a perpetual source, and a conditioned order of succession, this warp of all lines of causation is also woven across with the connecting woof of reciprocal influences, and thus that nature has its complete *contexture* which may be held as one web of a determined experience, and which no more adheres continuously than it also coheres transversely.

And, lastly, the conception of a *vacuum*, is of a space destitute of any force as substantial source, cause, or reciprocal influence. It is the negation of all being, and the affirmation of an utter vacuity in the midst of nature. And now such a void may be supposed, just as ideal space may be, but not at all consistently with a determined experience in space and time. If there is somewhere a rent in nature, which causation does not pass through, or action and reaction pass across; then can not that chasm of vacuity be at all determined as any place in the one objective space, nor any period in the one objective time; nor can the threads that may run along in it, or come up from it, be possibly determined as in the same one whole of space and time with each other. The understanding has no connective notion by which to carry its thought across it, and once to sink into it would be to lose all possibility of coming out of it. The functions of an understanding would be lost in it. Nature

not merely abhors but utterly forbids, within itself, a vacuum.

With the phenomenal as sense-conception already given, we may now completely apprehend the Understanding in the entire province through which all its possible functions may operate, and in this we have attained the perfect Idea. Phenomena are given in their definite but also isolate singularity, and no possible function of the sense can connect them in an experience as belonging to a universal nature. This must be a work exclusively for an understanding, which, by an operation of connection discursively through the notional, holds all nature to be one concrete of universal being. The possibility of determining the phenomenal in all the space and time-relations affords an *a priori* distinction between all subjective idealism and objective being; for, except as phenomena stand connected in their constant substance there can be no determination of them in the one immensity of space, and except as they stand also connected in their perpetual source, their successive cause, and their reciprocal influence, there can be no determination of them in the one eternity of time. A determined experience in space and time is utterly impossible except through such connections. The media of space and of time give the occasion for a complete demonstration of the necessity of the notional as connective for the phenomenal, in order to any possible experience determined in space and time.

From this *a priori* demonstration of the connection of all possible experience determined in space and time through a notional as the being of things in themselves, we have the valid synthetical judgments in their universality and necessity of comprehension—that qualities must inhere in their

substances—events must depend on their sources—effects must adhere through their causes—and all concomitant phenomena must cohere in their reciprocal influences—and thus all of Nature be possible to become an experience determined in space and time. A perpetual impenetrability will indicate the being of Substance, in its position in space and duration in time; a continual and irreversible order of apprehension will indicate the being of Cause; and an order of apprehension reversible at pleasure will indicate the being of Reciprocal Influence. An Understanding thus, is a faculty for connecting phenomena in a determined experience in space and time, through the notions of substance, cause, and reciprocal influence. The complete Idea concisely expressed is—*The Understanding is Faculty for a universally determined Experience in the connection of the phenomenal through the notional.*

SECTION VI.

FALSE SYSTEMS OF A UNIVERSAL NATURE EXPOSED IN THEIR DELUSIVE A PRIORI CONDITIONS.

A COMPLETE idea of an understanding induces at once a conception of the true Intellectual System of the Universe. Its application to all false systems will enable us to detect their fallacies at the very point of their departure from the conditions of the understanding itself, and thereby to trace their self-contradictions and absurdities to the source in which they become unintelligible. It will be the conclusion of this first Chapter of the understanding when, in this sec-

tion, we have applied our idea of an understanding to several erroneous conceptions of a Universal System of Nature, and thereby exposed their fallacies in their *à priori* sources.

From the earliest history of philosophy, we find the traces of a very earnest conflict perpetually occurring between those who have restricted nature wholly within the phenomenal, and those who have affirmed a notional as altogether beyond the region of the phenomenal, and wholly supersensible. The authority of Plato settles the great antiquity and the ardor of this contest. In the *Sophista* he affirms that "there seems to arise among them, in this dispute concerning *being* a kind of giant-battle." *Guest*. "The one party from the heavenly or unseen sphere draw all things down to Earth, just as the old giants grasped with their hands the rocks and oaks. Being ever in contact with such things as these, they affirm that that alone which offers touch and impact is real being. Hence they define matter and substance as the same, and as for any other things, should one maintain that the incorporeal truly *is*, they despise it altogether and will hear to nothing of the kind."

Theat. "Hard fellows these of whom you speak. I think I have met with some of them."

Guest. "Therefore it is that those who contend against them are very careful to draw their armor from the unseen sphere. These talk of "intelligibles" and "incorporeals," vehemently maintaining that they alone are real being. The "corporeals" of the other class, what they call truth and reality (*viz.*, their rocks and oaks), these break up into atoms, thus showing that instead of being entitled to the name of essence or substance they are but ever-flowing and

changing appearance. Between these parties, O, Theatetus! there is waged a war that knows no end." Aristotle, though philosophizing more concerning the phenomenal than the notional, yet no less explicitly than Plato, teaches an essence supersensible; separable from all phenomena; a substance indissoluble and indestructible. And certainly, this everlasting battle between the sensualists and super-sensualists can never be composed to peace except by an *a priori* science. The impossibility of an experience determined in space and time, except as the phenomena stand connected in their grounds and sources of being as substance, cause, and reciprocal agency, must be demonstrated, or we can never fully settle the controversy, and show that the phenomenal is the mode in the sense of that which, as thing itself, is the notional in the understanding.

But this idea of an understanding determining experience in space and time, is much further available for the exposing of many fallacies and philosophical delusions which have very much multiplied themselves about this operation of connecting the phenomenal in universal judgments by the interposition of a notion in the understanding. The great difficulty, as before noticed, lies in the verification of a synthetical judgment. This is readily effected in all cases where, by a construction of the conception, we can bring all its relations within an intuition. But when we are to judge of *existence* and not of *appearance*; of things and not of qualities; of inherent connections and not of external appositions; all construction in an intuition is out of the question. Our philosophical principle can not be made a mathematical axiom. The judgment is synthetical but necessarily discursive, and the only possible method for verifying its

validity is by subjecting it to the demonstration, that the connectives of the notional are a necessary condition for determining all experience in one whole of space and of time. In this we have the true and complete idea of an understanding. But these fallacies and delusions have originated from a method of philosophizing, that completely excluded all consideration of these necessary conditions. The nature of a discursive synthetical judgment was wholly overlooked, and thus, instead of applying all the force of an *a priori* intellectual investigation to the point of verifying the validity of the notional and the conclusions in the judgments thus connected, there has arisen the various attempts to attain to a Universal System of Nature, sometimes by an analytical process; sometimes by an arbitrary generalization; sometimes by mere assumption on the ground of common sense; and sometimes by the arbitrary omnipotence of divine interpositions.

The delusions we would here seek to dispel may be found in the ambiguity, on one side, of using the phenomenal as if it were a valid notional; or, on the other side, explaining the notional in its use by only the characteristics of the phenomenal. One intellectualizes the phenomenon, and then philosophizes as if this were a true notion in the understanding; the other sensualizes the notion, and then proceeds as if no substratum in an understanding were at all necessary. The understanding is made *to conjoin*, or the sense *to connect*; and from these opposite fallacies, philosophy has been involved in the grossest absurdities. Either Atheism or Pantheism must be the conclusion of all such processes of thinking in judgments, and it may be one as readily as the other. If the philosophy elevate the phe-

nomenal to a notional, it may keep out of sight that any supernatural connective is wanted; or, in the manifest emptiness of all thinking without a verified notional, it may arbitrarily introduce the supernatural simply because it is wanted; yet when so introduced as the connective in nature, it is impossible that its divinity should be any thing other than nature.

It is not a little amusing to watch the delusions induced by this ambiguous use of the phenomenal and the notional, from the position we have now attained, and see how the philosophy is forced to balance itself by an amphiboly, in which the ball is made to play from hand to hand according to the delusion which it is obliged to practice upon itself. We will pass the varieties of these two ambiguous uses of the sense and the understanding before us, sufficiently extended to detect their ever recurring fallacies; and this not so much for our amusement as to expose the ambiguity and dispel the delusion it has occasioned. The first sublimates the phenomenal to a notional in the understanding, and the last degrades the notional to a phenomenal in the sense. By keeping this examination ever within the light of our *a priori* Idea for all possible thinking in judgments, the detection of the deceptive ambiguity will be readily effected.

1. *The general process of physical philosophy where the phenomenal is elevated into a notional for the understanding.*

The common conception of material being, as the starting point for philosophy in building up a System of the Universe under this general process, may be thus described. The material world as given in vision or by the touch is an extension in space, and by resistance to muscular pressure

is apprehended as impenetrable body. This extended impenetrable body is capable of successive divisibility up to the primitive particles of which the mass has been compounded, and such particles in their ultimate analysis are deemed to be the primitive elements of material nature. As thus uncompounded, primitive and distinct, they are known as *atoms*. The phenomenal has in these atoms disappeared, inasmuch as the analysis has gone too far to permit that there should be a content in the sense, and that, which from its sublimation has passed out of the reach of the sensibility, is now taken to be valid thing in the thought. And here the first fallacy, the *πρῶτον ψεῦδος*, is found. This sublimated phenomenal, as having passed from the sensibility, is no longer considered to be phenomenal, but is intellectualized into the essential being of matter as thing in itself.

And now, with all matter given in its atomic elements, the labor of philosophically accounting for its combinations and systematic connections commences. How are these atoms combined in a body? How are bodies brought into system? How are systems held together as one universe? Here is the salient point for many diversified modifications of this general process of philosophizing. A few of the more prominent will cursorily be noticed.

(1.) There is an Atheistic scheme, according to which an attempt has been made to build up a system of Nature, that dates far back among the earliest annals of Grecian philosophizing, assigned to such names as Leucippus, Democritus, and Protagoras, but which can hardly claim to possess more than a semblance of systematic philosophy. The atoms were assumed to have not only position and hardness

but weight; and thus a fall of all atoms in the void space gave to matter an original motion in space. With these primordial atoms in motion, it was deemed a necessary consequence that resistances, percussions, collisions, and attritions should ensue; and thus aggregations of atoms would be induced, which would be bodies of diverse magnitudes, shapes, and movements in space. And inasmuch as such aggregations must take to themselves some position, and stand to each other in some relationship of figure, motion, density, etc.; and as the present actual composition of nature is one among the indefinite number of possible arrangements; it is only required that we admit the component atoms to have come together as they have, and this fortuitous concurrence has made nature what it is. There needed only primitive atoms enough, and their own weight put them in motion, and the present system of the universe has come into its own arrangement, and quite as readily this as any other among all possible combinations.

But aside from all questions of the origination of the atoms, and of their diffusion through the void, the false notional at once appears in the assumption of weight as an inherent property of the atoms, to give motion to them. The weight is solely phenomenal in the sense, but is surreptitiously used as if it were an intrinsic force, and thus a notional in the understanding. The deficiency at once discloses itself when there is any attempt to determine from it how the atoms should come together, and how when aggregated they can have any cohesion.

(2.) Epicurus, who lived amid the light diffused by the Socratic philosophy and the physical investigations of Aristotle, modified the atomic theory of Democritus to meet

some very manifest difficulties. He assumed the atoms to be immutable so that the weight and motion might have permanency, and that their number must be infinite, or in the infinite void a finite number must become dissipated and lost to each other in a disorderly movement. The void offers no resistance and the atoms must thus be precipitated with equal velocities and unvarying direction, and hence can no more come into conjunction than if each were falling in its own separate tube. Hence, Epicurus assumed an arbitrary inner energy that occasionally made slight deviations from an even and perpendicular fall. These arbitrary deflections aggregate the atoms into an infinity of worlds similar and dissimilar to our own, and amid the perpetual colliding, repelling, and rebounding, Nature comes to have combinations of form, place, and motion which now belong to it.

Here the false play of the weight of the atoms is noticed, and as the theory stands unbalanced the ball is changed into the empty hand to restore the equilibrium. The weight is solely phenomenal though deceptively used as a notional, and when the philosophy rests upon it for aggregating the atoms, the whole turns awry, for the phenomenal weight has no conditioning directory. The amphibolous play gives the arbitrary deflection to the losing side, and the reeling thought is steadied to take the step which may bring the atoms in juxtaposition in divers places and quantities. Here Epicurus stopped short; but a next attempt for a discursive judgment must have repeated the delusion. This arbitrary deflective energy was still phenomenal, like the flickering appearance of flame, or the zigzag motion of the lightning, and can possibly give nothing to stand under our

thinking. This fallacy of a false notional might everlastingly thus delude us, and we abide amid only the constructions of the sense though assuming to conclude in the philosophical judgments of the understanding.

(3.) A modification of the use of the phenomenal for the notional is found in the physical system of the Stoics. Zeno, Cleanthes, and Chrysippus, were the most noted among the founders of the philosophy of the Porch. Heraclitus flourished before the Socratic Era, but many of his principles and conclusions were adopted by the Stoics.

The incorporeal essences of Plato and Aristotle were rejected by the Stoics, and all true being was held to lie only in the corporeal. This was, however, made more comprehensive than the atomic aggregates of Democritus or Epicurus. To the phenomenal body of matter was ascribed* both a *passive* and an *active* state. The weight and the inner deflective agencies of the Epicurean philosophers, the Stoical philosophy ascribed to matter in its active state. As abstract generalizations, a vacuum, place, time, and merely logical conclusions were incorporeal, but when cognized as definite particulars they were considered to be corporeal. A definite cubic foot in space rested permanently in itself and was thus passive, but it excluded all other extension from its place and was thus active, and the particular pure place was thus as truly body as the empirical content.

The analysis of the phenomenal matter was not into the indivisible atoms, but into its quality and quantity. The quality was passive as the abiding, and the quantity was active as giving to itself limits and shape. The phenomenal properties were themselves body, and more than one body might occupy the same place at the same time. The *hard-*

ness of a cubic inch of gold, and the *yellowness* of it were both body, having content and form, passion and action, and yet both in the same place at once. The analysis was only of what appeared, but this as both content and form. The content was the passive side, and the form the active side, the first was matter and the last was spirit. But both the matter and spirit were in the one body, the spirit developing bodily form, the matter being developed into form. Thus the seed can not be developed but by its active spirit, and the spirit can develop nothing except as in a material germ, and the body of the plant has both matter and spirit, the passive and the active. God and the soul are spirit, and in their activity the universe and humanity are developed in bodily form. God, as the *informing word* (σπερμᾶτικός λόγος) of the universe, must reside in the matter of nature which He develops into bodily form, and in this constant development there is perpetual flow and change. This active, moreover, works in the passive, and in this non-resistance there can be no conditioning of the activity for there is no reciprocity of agency. It was not the *chance* of the Epicurean, as a defective phenomenon with no inherent efficiency; nor the proper *causality* of two modifying notional substances; but the Stoical *Fate*, as an activity with no determining conditions to guide it.

And yet such a peculiar analysis of the phenomenal and its results brings at once into use the same play of a delusive notional. Because, in constructing form, the intellect as constructing agent is active, it is here assumed the phenomenal form is bodily activity, and this is assumed to give dynamical connections. But so soon as this is used for connecting in judgments, the false notional betrays itself, and

the active as solely phenomenal must again be remanded to a further activity back of itself, and be compounded with matter. We then attempt to think the active as developing the material into bodily form, but at once we lose our balance again, for the matter in which the active is, and on which it is to work, and out of which as source is to come all bodily forms is utterly passive; a negation of all conditioning of the working, and leaving the active as mere blind Fate. But, as such a conception negates all intelligence and annihilates the understanding itself, the speculative Stoic throws the ball once more back and makes the activity as spirit to² be itself moved by a higher activity, and which is but the double absurdity of making fate to be fated. Here the stoical philosophy rested, on a blind activity unconditionally controlling gods, and men, and nature. There was a blind power back of the universal agent, standing behind the throne and controlling Jove himself. The whole was a vain attempt to think in the sense, and make discursive judgments by phenomenal analyses.

(4.) Pythagoras lived more than a hundred years before Socrates, and his name is connected with the earliest systems of philosophy extant. It is quite evident that he had a very full acquaintance with the ancient Egyptian philosophy and sciences, and may perhaps in many things be taken as a representative of the Egyptian method of thinking. It is only from the writers of the Pythagorean school who lived immediately precedent to the time of Socrates, that we attain a knowledge of the Pythagorean doctrine; as it is evidently from these that Plato and Aristotle drew their descriptions of this philosophy. These were mainly Philo-

laus, Eurytus, and Archytas, the first of which, more especially, gave shape to the Pythagorean system.

Their whole system is clothed in a mathematical garb, and their conceptions of things are expressed in the formula of numbers. Their first principle is "that number is the essence of all things;" and as all numbers have their combinations, and their relations in such constructions in a general harmony, and also express the relations of tones and give the ratios of musical intervals, so a principle nearly equivalent to the above was, "that all things exist through harmony." But the real meaning clothed in this mathematical dress is all we now need, in its most summary form, for the purpose of detecting another phase of that delusive amphiboly before noticed between the phenomenal and the notional. The process of this philosophy was wholly analytical, but in a different direction from the Atomists, or the Stoics in the passive and active of bodies. The phenomenal alone was used in discursive thinking, and which must have induced for synthetical judgments some double use of the phenomenal as a spurious notional; and this it is our design here to expose. The analysis proceeded in this direction: taking the phenomenal body as having length, breadth, and thickness in space, we have, as a first analytical result, surfaces; and when we further analyze surfaces, we have lines; and when we analyze lines, we have ultimately points. Points, as the ultimate analysis, are atoms. But these atoms or points are only limits, and not limited. In order that there should be a finite or limited body, there must be the point with an interval terminated by another point. All bodies are thus originally points and intervals, or atoms separated by a vacuum. The one point in vacuo is an atom;

two points, with their intervening vacuum, is a line; three points and their interval, when not continuous, is a surface; and four points, when any one is out of the plane of the other, is a solid. Here is the explanation in what way, "the essence of things is number." The unit is an atom; the dual, a line; the triplicate, a surface; and the quadruple, a solid. Definite numbers are also given for cubes, pentagons, hexagons, etc.

The system of nature is constituted of these elements of atoms and intervals; *i. e.*, of points and voids. These are the ultimate results of an analysis of all phenomena, and all being is thus taken as compounded of atoms and the voids interposed. With these, the philosophy commences to connect its system of universal nature. A generalization of all atomic being, as including all existence, is termed the One; and a generalization of the voids includes all the intervals interjacent to the atoms, and which is known as the Inexistent. The first One, standing in the infinite void, is known as the Odd; and assumed as spontaneously tending to a self-limitation by an inhaling of the circumjacent void within itself, which is called the inspiration of the Infinite; and this bringing of the infinite void into the One makes it to be compounded, extended, self-conscious, and all-comprising; and is in this the supreme force and essence of the universe now called the odd-even—inasmuch as the limiting atom and the separating interval are now in unity within itself. Here now, as a triad, is in this odd-even the capacity for the beginning, the middle, and the end; and as thus including the entire elements of being it becomes THE ALL. The All is now competent to divide and separate itself indefinitely by inhaling the void between the atoms, and thus

extending and limiting itself and thereby distinguishing in self-consciousness ; and this limiting itself in its distinct and definite portions secures that it becomes Uranus, or the world. The different elements of nature—as fire, air, earth, water—are the products of different compounds of atoms and intervals, and which have their expression in numbers ; and the arrangement of all was with a cube or a pyramid of fire, as the altar of the universe and the watch-tower of Jupiter, at the center ; and from which goes constantly out the flame which pervades and encloses the worlds, and constitutes the grand vortices in which all the discriminated compounds of atoms and voids are kept perpetually moving about in their orbits. This movement was after the law of harmony, and supposed to be attended by sounds too sublime for mortal ears to hear, but which to the gods were the perpetually ravishing music of the spheres.

Now, without inquiring into the genesis of the primary atoms, and which, by inhaling the void and thereby being rendered capable of self-conscious limitations, become monads ; and not at all seeking the validity of the generalization, which can give only an *ideal* unity to the atoms as the Supreme One, and an *ideal* combination of the one existent and the infinite inexistent as the odd-even or the ALL ; we only need to trace, in the light of the true idea of an understanding, the ambiguity here involved, and all the delusion is at once exposed in its primary sources. The atom even as generalized to the universal One, is but the phenomenal carried beyond all perception and made a pure intuition ; and this, taken from the field of the sense, is assumed to have entered the field of the understanding and thereby a mere intuition is delusively used as a notion. But when

the thinking discursively commences, the false notional has no subsistency, and hence to save the fall, the ball must be thrown into the empty hand as a higher assumed notional, which is a force seeking after a self-conscious limitation. The atom has thus an inner causation which moves it, and in this way has become again phenomenon, and the inhaling or self-limiting energy has been put as the connecting notional. But this again, though assumed as the supreme governing force of the universe, inasmuch as it may act only upon the passive void which it inhales into itself has no force nor reaction, and thus can give no connection to the atoms. So soon therefore as the mundane force is to be used for connecting the combined atoms into a universe, to save the fall again the ball must be thrown forward as a newly assumed notional in the vortices of the central fire which is made to pervade the spheres, and to float them about in its gyrations.

Here the Pythagorean system stops short, but it is quite as little self-balanced as before it commenced its delusive philosophizing; for the next step upon the vortices must at once make them to be as truly phenomenal as the spheres which they carry about, and we must still seek another balance-weight in some new notional which shall condition the gyrations of the flaming vortices. The philosophy can not be completed, because an analysis of phenomena can never supply an understanding-cognition, as true notional connective.

(5.) Another modification of the atomic theory, to provide for this defect in the impossibility of an ultimate analysis, is effected by Descartes; and would fill up the void in the notional by at once interposing the supernatural. The

outline of the Cartesian physical philosophy is as follows : Material being has its essence in *extension*. All external phenomena are in some way qualities of extension, and thus only different modes of extended being, while the simple extension itself is the sole essence. This indefinite extension, as the original essence of the material universe, is separable and moveable, and therefore capable of a division into definite parts. The first modification of material essence was the breaking up of this indefinite extension into angular portions, and which in the movement of their breaking up pressed against and were made to grind upon each other, and this attrition rounded the fractured parts into small spherical atoms. Interposed between these small spherical atoms, was every where the still finer dust which worked off in the grinding. This finer dust is the *first* component element of nature, and the spherical atoms are the *second* element.

The original disruption of the mass and the consequent concussions occasioned whirls and eddies, in which the finer dust of the first element was carried about in different vortices ; and this prepares the way for the philosophical connection of the elements into a system, and which is thus effected. The fine dust of the first element, in its exceeding minuteness, thus whirling about, naturally tends in its motion toward the foci of the vortices in which it is carried around, and is thus subtracted from the matter of the second element, leaving the spherical atoms diffused through the heavens, and which, as thus cleansed from all the floating dust, become the medium of light. The first element, so far as carried into the foci of the vortices, becomes there condensed and steadfast in position except as turning about its own

center, and thus constitutes the different suns of the different vortical systems. And yet very much of this fine matter of the first element tended to cohere ere it reached the centers of the vortices, and such incipient coherences become a *third* element, more dense than the spherical atoms of light as the second element, and according to its different densities came together in masses at different points in the vortices from the suns at the center, and formed the planets and comets as they are carried about in their respective systems. In process of time the larger vortices absorbed the smaller and controlled them in its own, and the satellites while carried about their primaries were all carried about in the great solar vortex; and thus our solar system, and in like manner all other systems of the universe, became completely established in their bodies and their revolutions.

And now, all this, as in the Pythagorean system, is wholly phenomenal, so far as the being, figure, arrangement, and revolution of the material world is considered. Extension is solely a sense-conception, and thus the very being of matter is given only in the sense, and the understanding supplies no notional at all as a connective. The Cartesian philosophy can know nothing of substance and cause as space-filling force existing in nature, and even the negative of substance as a vacuum is an impossible conception. Descartes thus reasons against the possibility of a vacuum—that if there were any such thing it might be measured, and all measure implies extension, and all extension is essential matter, and thus no vacuum can be. And in this, precisely, is its peculiarity. Altogether unlike the Pythagorean philosophy, when it has analyzed the phenomenal and found its highest analytical predicate in the conception of extension, and de-

nied that any extension can be a void but must be material essence, and thus wholly phenomenal; it does not, like that, attempt to sublimate the phenomenal into a notional. Descartes had already provided for such want, in beforehand preparing for himself a connective wholly supernatural, and which allowed that he should utterly dispense with all function of an understanding, and connect directly by the reason. The phenomenal is held together not through substance and cause, but immediately by the Deity. Indeed, that the phenomenal can at all be known to be, depends upon having first demonstrated the spiritual to be; and all physical science originates in the previous science of Theology. This, so peculiar a method of building up a nature of things by making its whole connective supernatural—and yet in such a way, as we shall see, that an amphiboly introduces its delusive play in another form though as really as in any of the preceding which has been noticed—demands that we carefully examine it, and be able to make a fair exposition of its fallacies.

Cartesianism, then, begins in universal doubt, and seeks for a first verified truth. In this very casting about for what may dispel all doubt, there is an action which may be called thought; and in this very thinking, there is an awakening in self-consciousness. Thus, in the thought itself, the mind becomes cognizant of its own being. Here, then, is the first truth for all possible science—I think, and in thinking I cognize my own existence. "*Cogito ergo sum.*" Having thus the existence of mind, and having found that this mind has many thoughts, which are named all as alike ideas, it makes *clearness* and *distinctness* the criterion of the truth of our ideas; and then finds this one grand idea as

more obtrusive, absorbing, and unavoidable in the clearness of its presence than all others, viz., an all-perfect Infinite Being. Such an idea, so controlling and necessary, could not be in the mind from the mind itself nor from any other source, except as it originates in the actual existence of this all-perfect Being himself. The prominence, clearness, and necessity of the idea of a God is proof *à priori* of the actual existence of a God. Thus the thinking soul is, and God is.

And now the sense gives us an outer world; but the sense can verify nothing, and only make phenomena to appear. But we have already cognized an all-perfect Being, and His veracity must be manifested in His works. The outer world, therefore, exists, or God has falsified His own veracity in making man the subject of perpetual and helpless deception. The truth that the outer world is, rests upon the truth that God is, and that His works do not deceive. In this way we come to the demonstration of an outer world as phenomenal reality. This outer world is then, in the last analysis, found to be extension; and this, as the essence of all matter, is brought into its present arrangement as system of the universe, according to the foregoing process of the atoms in the vortices.

Thought is the Cartesian essence of mind, and extension that of matter, and in these is included all possible being. They are utterly unlike, and can have no reciprocal communion with each other. No connection is to be thought between them, as if one could act upon or be affected by the other. The essence of matter is wholly inert; thought only is active. And in this is the provision made for all the dynamical connections in nature. The breaking up of the

inert essence of matter, the attrition into the first and second elements, the vortical revolutions and the connections of finite mind with matter, are all resolved into the immediate interposition of the Deity. The doctrine of "Divine Assistance" is made to account for all the movement and changes of nature.

And here, so far as the physical connection of the phenomenal universe is regarded, this philosophy has the merit of a logical consistency. It does not as in the preceding, attempt by an analysis of material phenomena to attain a notional in the understanding, by which to connect into a judgment a nature of things. The connective is supplied in another manner, and the supernatural is immediately introduced as the constituting force on which a system of nature depends. But, though not in the same direction as in the former theories, yet still from another quarter a similar ambiguity is introduced, and a delusion is effected which is to be dispelled by applying the true idea of an understanding. The false notional is not at all attempted from the material, but is derived from the spiritual phenomenon. The whole Cartesian philosophy founds upon Thought, as its first given fact. The phenomenon of thinking induces consciousness, and this is made evidential of a self, or an Ego, which thinks. That I have self-consciousness in thinking is taken as valid that I have in this, myself, as notional subject of thinking. Self-consciousness is sublimated into an understanding cognition of a permanent substance, as the causal source of thought. Here, then, is the first deceptive ambiguity. The thinking in consciousness is wholly phenomenal; and an analysis of the exercise in the thinking and of the thought as product, and one put as the subjec-

tive and the other as the objective, deludes into the conviction that the supersensual subject Ego is truly attained. And then the speculation is still further advanced, that inasmuch as the analysis of the subjective can be carried no higher, therefore the Ego, as soul, is simple, indivisible, and immortal.

But, inasmuch as the soul, which is thus surreptitiously assumed as the understanding cognition and permanent notional source for all thinking, can be source only for the thinking as inner phenomenon, and not at all source for the phenomena of an outer world, and therefore no knowledge of a nature of things can be attained through such connections; the philosophy returns to the phenomenal thought, and demonstrates the being and connections of an outward nature of things by another and entirely independent process. One thought as product is separated in an analysis from the thinking as intellectual activity, and because it is more prominent, absorbing, and necessary than all others, is taken to be more distinct and clear than any, and on this account the most true and valid of any, viz., that of an All-Perfect Being; and in this assumed validity of existence from the necessity of the idea, the being and perfections of God are considered as *à priori* demonstrated. The phenomenal in the inner sense is made available here, not merely for a notional source of thinking, as self or soul, but taking the thought, as product, is made available for attaining immediately the supernatural as substantial ground for the thought; and the phenomenal is at once elevated to the divine. The sense is made to perform the functions of the reason.

But inasmuch, again, as the philosophy needs only a physical substratum and connection, so this Deity, assumed

to be from the clearness of the thought of the All-perfect, is used only as philosophical source for constituting a universal system of nature, and degraded to a mere physical force, as cause in an understanding cognition, for breaking up the original essence somehow unaccountably generated, and grinding it into its atomic elements, and whiling the subtle vortices which are to shape all things in their individual forms and systematic revolutions. While avoiding the absurdities of attaining its false notional connectives from a sublimation of the *outer* phenomena, it runs into even more gross fallacies and violent subreptions, in attempting delusively to attain its notional connectives wholly through a sublimation of the *inner* phenomena. The ambiguity of the phenomenal for the notional is the same as in the former theories examined, and the fallacy heightened in absurdity by elevating the phenomenal immediately to the supernatural, and then degrading the divinity of the supernatural to the bondage and perpetual servitude of the natural. The Deity is needed only for holding nature to its place.

Malebranche simply carried forward Cartesianism to its ultimate results, without the addition of any important new principle; and the necessity for supernatural interpositions in nature became with him a completed doctrine of "Occasional causes," and the vision of all things in the Deity, and a resting of all evidence of the reality of an outer world upon divine Revelation.

(6.) Spinoza so far modified this philosophy in its foundation-principles as to make indeed a new system of the physical universe. The two essences of thought and extension which had been conceived as so heterogeneous that they could not come into communion, and hence demanded

supernatural interpositions, were by Spinoza generalized and identified in a higher essence, which was assumed as ultimate, indivisible, and eternally immutable, and thus the Absolute Substance. God is not a personality, acting according to the imperatives of reason in view of final ends; but a simple essence, in the absoluteness of its own being developing a nature of things in the perpetual unfolding of itself. Extension and thought are merely analytical conceptions of this infinite substance in which they are identical. The absolute essence is both infinite thought and infinite extension, and thus all mind and all matter are but the modified development and modes of existence of the All-Perfect Being. A supernatural interposition is not needed to constitute and hold together a nature of things; the supernatural is developed into nature itself. An unfolding Deity is the universe.

And here Spinozism is unquestionably more philosophically consistent than Cartesianism. It does not attempt to explain nature by getting a supernatural *a priori* to it, and then absorbing all of nature in this supernatural; but entirely reversing the process, it goes through nature up to the absolute substance, and then accounts for nature by evolving it from the absolute. Both may be termed Pantheistic; but Descartes's God is diffused as causality through nature, and Spinoza's God is the substance which in its own development becomes nature. But, in this last, there is the same ambiguous use of the phenomenal for the notional—a delusive substitution of the functions of the sense for the functions of the understanding—and thus attempting to think in discursive synthetical judgments with no valid medium through which to make the discursus, and therefore no

valid connection in which to legitimate the conclusion in a judgment.

The thought and extension are simply the sublimations of the phenomenal, and not at all a valid notional supplied in the understanding ; and instead of vainly attempting to think them into a nature of things by the interposition of whirling vortices, which again are but interpositions of supernatural agency, the attempt, equally as vain, is made to think them into connection by a higher sublimation of the phenomenal, and assuming it to be a valid substance as notion in the understanding, and then arbitrarily educing a nature of things from it, merely by a development of it. Let it be demanded to think in a judgment a connected order for this development, and all the philosophy of Spinoza is wholly impotent. It will then require a further sublimation of this assumed notional as absolute substance, and which is no more space-filling force, as substance, cause, and reciprocal influence, than the phenomenal thought and extension themselves. It stops with this assumed substance, but it is a mere delusive stopping-place ; for philosophy as much demands an intelligent development of nature in a conditioning source, as a resting of nature upon an ultimate substance. Only a true idea of an understanding verifying its notional in a determined experience in the space and time-relations can do this.

(7.) The genius of Leibnitz, penetrating, powerful, and comprehensive beyond that of most philosophers, apprehended clearly the difficulties in the Cartesian system, and that they were still left unresolved in all the modifications of Spinozism ; and in a manner evincive of the superiority of his intellect, he set himself to work a reformation in the

very first principles of this philosophizing. But, manifestly, from the want of a true idea of an understanding in its operation of discursive connection, he only modified the system, but did not at all change the order of the thinking. It is still an attempt to sublimate the phenomenal to a notional, and to think a universal connection in a nature of things by only notionalizing the phenomenal. The acuteness and fertility of his mind is astonishing, but in the absence of the true light, it only changed the point of the delusive ambiguity, and still retained all the false play of the deceptive amphiboly before noticed.

The grand difficulty in the Cartesian system was the inertness of all physical essence. Causation could nowhere be used as a connective in nature itself, but must every where be superinduced upon nature, and thus perpetually demanding the supernatural. Nor did Spinoza's generalization of all thought and extension into the different modes of one assumed absolute substance help this difficulty. It gave a specious unity to nature, but provided for no intelligible exposition of the successive on-going in the changes of nature. A substantial ground was assumed, but because it was only a sublimation of the phenomenal, it could give no understanding-cognition of force as a cause for change in a space-filling substance, and which might thereby condition an alteration of the phenomena in the sense. This deficiency was to be supplied, and somehow the notion of causality introduced into nature. This is the leading interest in the Leibnitzian physics, and the stand-point from whence to take an examination of this philosophy; and yet we shall find this causality to be merely an intellectualizing of the sense,

though with much ingenuity, and giving much plausibility to the fallacy.

The analysis of matter which Leibnitz assumed to be always given to us compounded, was the first step, and from this the atomic theory was necessarily adopted. The last analysis attained to an indivisible, indissoluble portion; and this atom, as thus wholly unextended and impossible to come under any outward determination, can only be distinguishable from other atoms in virtue of something within itself. Hence the principle of "the indistinguishable" in matter by any thing external. But changes are perpetually occurring in the atoms, and some "sufficient cause" is to be found for them; and as this can not be from any outer conditioning, but must be determined from the inner, and the inner can have nothing of extension or composition, so nothing is left but that it must be distinguishable in virtue of its inherent energy. A sort of representation-force, analogous to that which is an inherent property of mind, must be possessed by all atoms, and in the modifications of this only can one atom be determined as distinguishable from all others. Thus, the atoms are not inert and passive, as with Democritus and Descartes, but possess an inherent energy as power of inward representation, and in virtue of this inner causality they are not dead atoms, but monads. Each has its own particular representation-force, and in this is its principle of identity; and as each also is competent from this inner energy to represent all others within itself, every monad is competent to become a little world in itself and is "a microcosm." Some monads have their inner representation-force in utter unconsciousness, and are the elements of material nature; others are partially awakened into con-

sciousness, and have indistinct representations, and are the elements of animal spirits; and others again have this inner energy developed into full and distinct consciousness, and are the elements of the rational human soul. God is the ABSOLUTE MONAD; and His existence, we are forced from the laws and conditions of all thought to admit, and He stands as "sufficient reason" for the existence of all others. Thus, the elements for an intellectual system of the universe, all stand ready for a philosophical putting of a nature of things together.

In this particular possession of inner representation-energy, the whole must give all possible phases of being, and in such universality of representation there must be "perfection." Inasmuch as essential monadic being can have no determined external relationship, but only inner representation, so space can be no *a priori* condition of nature, but wholly consequential upon its being and representation. The representation-force is first, and space is produced in the representation—as if to the mirror there was no outer, then the mirror must first be, and the represented space consequently produced within it. In such production of space there is, of course, occasion given for the position, figure, and relative bearings of all that the monad shall envisage; and this in the case of all monads; and thus all things appear in space. But how is it that the relations correspond in time? The energizing causality is wholly inward, and not that one monad can act outwardly upon another; how, then, shall their separate and individual representations conform each to each? This demanded, not the "the occasional causes" of Cartesianism which would require a perpetual interposition for each case, but an original

arrangement which should harmonize all in their representations forever. And here is introduced the doctrine of "a preëstablished harmony," in which all monadic representation-forces, as so many mirrors each representing the state of all the others, are made to tally precisely each with each. The entire universe of conscious and unconscious monads thus go on in their inner causal representations, not from any community of influences reciprocally among themselves, but orderly and successively in their periods from the wise arrangement of all in an original predetermination.

With all our interest in such surprising creations of genius, still how amusing to watch the double-play perpetually going on between the sense and the understanding! The sense gives to us every thing compounded and thus confused; and the mere analysis of this, according to this method of philosophizing, takes it out of the sense, and gives to us the things themselves in their essential being in the understanding. Thus the atoms become things as understanding-cognitions; and yet when we would think them in discursive connections, we are forced further onward for our real notion of things, and must endow them with an inherent causal-energy. Then, inasmuch as it must be an analysis from sense, and we have analyzed the atom beyond all outer relation, we take the causal-energy from an analogy of what may be attained in an analysis of our inner phenomena, and make it to be a representation-force. And when we would use this as the medium for a discursive connection, it is wholly impotent, and we are again forced forward for our notional to an independent and unexplained pre-determination, which is the original connective for this harmony. The notional is ever thrown forward, and when

we essay to step upon it, it straightway fails altogether as a ground for the thinking, and the judgment is ever thrust forward into the void, hopeless of all support. It thus, also, makes every principle it uses delusive. The principle of "the indistinguishable" is found in the use which the understanding makes of this false notional throughout. The phenomenal is analyzed beyond all outer determinations, and as if now it were the substantial thing in itself, its distinction from all others is to be found in the inner only. Difference of identity can not be determined by place, for space itself is the product of a representation. The principle of "sufficient cause" is for the same reason delusive, and no true notion of force can be conceived, but only harmonious representations. The representations can not counteract; their opposition would be simply irregularity in time, as if the clock should not strike just when the hand points the hour. And finally, the principle of "preëstablished harmony" leads to the same delusion, on the same account of a use of the false notional; for this harmony is merely conformity of representations, not an agreement of interacting dynamical forces. The system is, after all, simply the regulation for representing appearances, not the control and arrangement of acting and resisting substances. It is no more a nature of things than the accordant reflections of two mirrors face to face.

We will now give attention to the other method of philosophizing, viz.:

2. *That which degrades the notional to a vague phenomenal, or entirely dispenses with it.*

In this order of building up a physical system, nothing is permitted to enter as conception of valid being which has

not been attained through the sense. A supposed supersensual is to be held as delusory, and though accompanied by irresistible conviction can be determined as resting upon no valid basis.

The philosophy of Locke in accounting for the origination of all our knowledge, is the source of all this order of philosophizing in physics. The elements of all knowledge and the essence of all being are given to us according to Locke, through two sources only, viz.: Sensation, giving to us that which is material element, and Reflection, giving to us that which is mental element. All our simple elementary knowledge is thus provided for. The simple elements, passively received, may be in various ways modified through the activity of the mind itself, and thus known in various determined relations. The mind is competent, having attained the simple elements, to combine, compare, and abstract; and through such mental operations we may know the elements as united, contrasted, and isolated. Hence our conceptions of double and single, even and odd, greater and less, higher and lower, general and particular, etc. All conceptions, not themselves elementary as given in the sense, are to be thus attained by a mental operation upon what is given in the sense; and all such operation is confined within these three functions—combination, comparison, and abstraction.

From what we have already gained in our former investigation, it is manifest that all those immediate intuitions which are given in the definite constructions of the phenomena of sense, may in this way be accounted for; but the system of Locke greatly errs in its partiality and incompleteness, in supposing that any conceptions, conditional for

discursive synthetical judgments, can be thus attained. Conjunction may thus be effected, but not connection. Relationship in space, time, and amount, may thus be determined; but not the inner dynamical relationships of being itself. The notions of substance, cause, and reciprocal influence, are no combinations, comparisons, nor abstractions of any simple elements attained in sense. Here is the grand defect of the sensualism of Locke. It would get along with only the functions of the sense. Sensation gives all phenomena; reflection gives all the intuitive relations of phenomena; and no distinction is recognized between joining and connecting—mathematical and dynamical relations—intuitive and discursive judgments. Hence it would obtain the conceptions of cause and substance as it would those of likeness and difference. The philosophy begins in the sense, as all knowledge must; but it also ends in the sense, as no true philosophy can be permitted to do. Instead of any intelligible dynamic connections, we have really only juxtapositions and sequences. All understanding-cognitions are forced to be, in some way, the determinations of sense.

From this philosophy diverse theories have arisen in reference to various topics of speculative interest, such as are designed to explain the manner of perception; the foundation of moral obligation and responsibility; and the capability of attaining the data for a natural theology; but we have occasion now to consider such only as relate to a universal nature of things. A few of the more prominent cases will be sufficient to expose the illusion which comes in on this side, and show the deceptive ambiguity in the point

of degrading the notional to a mere phenomenal, as connective for a universal physical system.

(1.) The first to be here noticed is the theory of David Hume. Whether the philosophy of Locke induced the skepticism of Hume, or whether the skepticism was itself congenial and the philosophy adopted as the means of justifying it, is not incumbent upon us here to decide. This much is clear, that he most acutely detected the skeptical tendencies of this philosophy, and as legitimately as intrepidly pushed the issue to the entire subversion of all philosophy in physics and of all science in theology. Nature and Religion have no other foundations than such as must be laid in faith, and which in each case may easily be convicted of credulity; and therefore to the consistent philosopher there is nothing so natural, so logically consequential, and thus nothing so noble, as to avow his doubts of them both.

The process in Hume's philosophizing is very plain and direct from the premises given. Knowledge, as given direct through the perceptions of sense, is experience; and all such sensible objects are termed "Impressions." The recalling of such impressions by the memory, or the anticipation of them in the imagination, he terms "Ideas." The ideas are the copies of the impressions, but as secondary they must be more faint and indistinct than the primary perceptions. We can have "impressions" of only that which is given in experience; and no "ideas" in the memory or the imagination which must not also be the copies of experience. These "impressions" and "ideas" are the mind's entire stock of original elements for all knowledge; and by the functions of combination, comparison, and abstraction, these elements may be brought into various propositions and

judgments; and such modifications of them must constitute the sum total of all that man can know.

And now, "the relations of ideas," as given in the comparisons and combinations of the mind, are demonstratively certain; inasmuch as they are intuitive, or immediately beheld; and in this field lie all the conclusions of mathematics. Here is exact science. But "matters of fact" can not be made to stand together in any such relations, and can not therefore be brought within the demonstrations of science. How clearly, in all this, did Hume see that no intuitive process could legitimate a discursive judgment! That any present fact in our experience should be connected with another fact which is to follow it, can not be made intuition; and yet, by calling the last an effect of the first as its cause, we assume that there is a necessary connection, and then carry our convictions quite out of experience, and assume to determine how other facts and events must be, which have not at all been matters of experience, and perhaps are not yet at all in being. By what legitimate principles are such connections in judgments effected? All *à priori* demonstration, that such a connection must be in order that experience should be determined in the space and time-relations, was unknown to Hume, and utterly impossible to be effected by any philosophy based upon experience; and thus his skepticism in physical science stood impregnable. The effect can not be immediately seen in the cause; no possible construction can give an intuition from one to the other; and thus there can not be any predetermination of what the consequent shall be from any thing given in the antecedent. All reasoning from effect to cause, or from cause to effect, is thus wholly an assumption. All that can be said for it, and

the clearest explanation of any conviction attained through it, is simply resolved into the result which a repetition of experience induces in the mind.

The *philosophical explanation* of the process is this ; a first experience of such connection was like all other experience, an "impression" as a primary fact of sequence without any conception of necessity in the order of connection. Frequent repetition of the same sequence as "impression," induces its copy as "idea" in the memory, and this also is put as copy in the anticipations of the imagination ; and this copy as idea, faint at first, ultimately becomes strong and confident "belief" that such connections are necessary. The conception of cause is an "idea," as it is a copy of an "impression," and is thus a mere offspring of experience as truly as any other copy in the memory or the imagination. The experience has given the idea of cause ; cause has not determined the order of experience ; and hence all reasoning from causes, as any *a priori* conditioning of nature, must be mere sophistry. Both Natural Philosophy, and Natural Theology are at once convicted of building a structure without a basis.

And here we may detect the fallacy of the philosophy in its very source, and dispel the delusion which has given so much speciousness to this skepticism, by applying our *a priori* idea of an understanding as function for connecting phenomena in a system of universal nature. And this fallacy will at once, in this light, be seen to lie in the ambiguity of using the same cognition as both in the sense and in the understanding. Here the understanding-cognition is sensualized into the phenomenal, whereas in the former order of philosophizing, the sense-conception was intellec-

tualized into the notional. The "impression" is wholly of the sense, and is thus phenomenon only. The sequences of events are phenomenal sequences altogether, and they account for our *convictions* of necessary connection simply through their repetition in experience. But no account is attempted for any necessary order in the *events of nature* itself. The connectives for phenomena into a cognition of a universal nature of things are themselves mere copies of the phenomenal. Cause and effect in their own necessary connections do not condition our experience, but the repetitions of our experience condition all our "ideas" of causation. The same also must have been true of the connectives of substance, and of reciprocal influence, as of cause; only that the skepticism did not philosophize broad enough to encounter the necessity for their explanation. The notion in the understanding is degraded to a mere copy of the phenomenal in the sense, and gives to philosophy a nature of things which only seem to be connected in universal order and system, because the phenomena as original "impressions" have in the sense had their juxtapositions and sequences. Nature is merely a mass of appearances, and not a connection of existences: a continuance of "impressions," and not a series of things. And without a true notional in the understanding, as *a priori* demonstrated from the conditions of determining an experience in the space and time-relations, this is all to which philosophy could attain. Science could not go beyond sense. Mathematics only could be exact; philosophy and theology must be opinion and faith. All judgments of a nature of things must rest upon mere phantasms as the copies of those "impressions" which we deem them to connect; and all the conclu-

sions of natural philosophy and theology rest solely upon the credulity which our habitual experience has induced. The supercilious sneer of the skeptic springs spontaneously from his clear perception that both philosophy and religion have no foundation.

(2.) Another example of this delusive method of discursive thinking is given in the philosophy of Brown. The understanding-cognition is degraded to a mere illusion of the sense, and then rejected as an empty figment. The order of nature in the connected series of cause and effect is reduced to a mere fact of invariable sequence, which the human mind is so made as unavoidably to anticipate.

This entire theory of causation is expressed in the following statement. According to Brown, simple invariable succession is the entire conception of cause and effect. The conception of *power*, as some bond which connects the antecedent and the consequent, is affirmed by him to be an illusive phantom of the imagination; and though common to all former philosophers with the vulgar, is yet a mere chimera. That an illusion of some third thing, called power, stands between the two sequences and connects them, he explains as having become a general admission from various sources. The structure of language; a false identity between a thing with and without a particular predicate, as if the sun shining and the sun, or the man thinking and the man, were respectively the same; and the imperfection of the sense which is perpetually finding higher antecedents; all these are made to explain the fact that the delusive conception of power has become so common. But when the mind is disabused of this delusion, then the whole process of cause and effect ceases to be so mysterious and inexplicable. There is

no such mysterious something ever present in all sequences and never appearing, which has been called power, for connecting them together.

Such an illusion of an intervening connective does not help to explain our conception of cause and effect, but in truth gives another antecedent altogether more inexplicable than the phenomenon itself. Expel such a delusion, and then there remains simple invariable sequence. The whole real meaning of power is, therefore, this invariableness of succession. To say that a certain degree of heat applied to a metal will have its invariable consequent of liquefaction ; or to say that a certain volition is invariably followed by muscular motion, is in each case the same as to say that the first has power to produce the last, and which again is the same as to say the first is the cause of the last. Invariableness of sequence is the whole conception of power and of causation. Having thus taken away all intrinsic dynamical connection, the natural inquiry for the origin of this universal conviction of invariable succession is met by cutting, without any attempt at untying, the knot, and resolving the whole into an arbitrary constitution of the human mind. We are so made as necessarily to imbibe such a conviction. It is an instinct implanted in human nature, operating as an "internal revelation," and is "a voice of ceaseless and unerring prophecy."

Locke had attempted to account for the genesis of such a conception as power, and thus for causation, from sensible experience. But Brown, more clearly than Locke, saw the impossibility of attaining any proper conception of power as phenomenon in sense. Obedient to the philosophy, therefore, since the conception of power can not come

from it, it is taken as wholly a delusion, and its reality discarded altogether. If it were at all possible to be used, he knows of no other method than by interposing it as another phenomenal antecedent to the effect, and thus merely perplexing the matter without at all explaining it. It is made the mere shadow which coming events cast before them, and the mind from its conformation anticipates the consequent as wholly an unexplained prediction. The notional, as understanding-cognition, is wholly abolished in the mere sense-cognition of an invariable sequence, and the conviction of such invariable order is an instinctive prophesying.

But how impossible thus to attain to an intellectual system of universal nature! The separate phenomena are as really independent of all inter-agency as the particles of dust floating in the sunlight, and simply *have* such an invariable order, but nothing which efficiently *produces* it. Nature is a mere congeries of phenomena, and as destitute of all connection and reciprocal communion as the letters of the alphabet.

(3.) There are two other modifications of this method of philosophizing, having an immediate reference to *mental* phenomena, and out of which have originated two theories for giving to the mind systematic unity; and which are of the more interest for American psychologists, since their respective authors were divines of great distinction and high reputation in the religious community of New England while they lived, and their influence upon all metaphysical speculation will not cease with the generation that now succeeds them. We need have no reference to any theological doctrines to which these theories may have been applied, either for explanation, defense, or refutation; nor to any

other religious or philosophical tenets of their authors, but solely to the methods in which mental phenomena are sought to be connected into a system in the Understanding.

The *first* to which we will here attend, though later in age, is the theory of the late Dr. Emmons, so venerable while living, and so much revered since his death. This theory has been familiarly called "the exercise scheme," and when referred to the true idea of an understanding as above attained, will be found to follow that order of philosophizing which we are now considering—making the phenomenal to be the essential being, and wholly dispensing with the notional, or introducing an arbitrary and illusory figment.

The outline of this theory is as follows:—The specific acts of thinking, feeling, loving, willing, etc., come within consciousness, and each one for the period of its duration is the soul in its essential being. There is no true substance which, as constant substratum or perpetual source, permanently exists, and that changes in its mode of being so as to occasion the altered events; but when the thinking is, that is the soul; and when that departs and a feeling or a willing is, the exercise is all there is of the being, and the soul exists as one and simple in every act. The voluntary exercises make the moral man, and all such acts in distinction from intellectual acts are known as the heart. "The heart consists in voluntary exercises, and voluntary exercises are moral agency." "There is no morally corrupt nature, distinct from free voluntary sinful exercises." The phenomenal is the sole being of mind, and nothing is but that which is the exercise itself.

And here, with all existence wholly in the exercise and utterly exclusive of any substance which may be thought as

perpetual source for the exercises, the inquiry must arise—Whence are these exercises? Is there a void of all being between them, and thus does each, as essential existence, come up from a vacuity of all existence? This would seem to be the necessary conclusion, since no substantial being is, which may perdure through all the exercises. To escape from such a chasm of all being and an origination of the phenomenal being of the exercise utterly from a void, as must follow when the notional is discarded and an understanding is vacated, the supernatural is immediately interposed, and the exercise comes up as a direct production of the Deity. “Since all men are dependent agents, all their motions, exercises, or actions must originate from a Divine efficiency. We can no more act than we can exist without the constant aid and influence of the Deity.” The supernatural is thus made to take the place of the notional, and all the phenomena immediately originate in God, and are connected in unity by the direct efficiency of God. The human agency is the exercise itself, and the Divine agency is the efficient producer of it; and thus it is affirmed that “human agency is always inseparably connected with Divine agency.” “He not only prepared persons to act, but made them act.” “There is no possible way in which He could dispose them to act right or wrong but only by producing right or wrong volitions in their hearts. And if He produced their bad as well as good volitions, then His agency was concerned in precisely the same manner in their wrong as in their right actions.” “His agency in making them act necessarily connects His agency and theirs together.” The Divine efficiency is thus made to subserve all the purposes of the notional in an understanding, and the phenomenal

exercises come up from it, and adhere together in a series by it.

But the delusiveness of such a false connection in the understanding is at once exposed, when we step forward upon it and trust our philosophy to it. For all that we possibly know is the phenomenal only, and all our conceptions must conform to the phenomenal, and although we have used the efficiency of the Deity as the origin and connective of all human exercises, yet must we now degrade this supernatural, used as a notional, at once to the phenomenal only. How may we conceive of the Divine agency in any other manner than as phenomenal exercise? Divine efficiency in producing our exercises is but an exercise, single and simple in being as our own. This, in other connections of the theory, is fully admitted and even directly argued, though when fully apprehended in its bearings upon the philosophy it shows its whole basis to be a mere delusion. The Divine efficiency is wholly ambiguous; it has been used as a notional, but when we come to rest upon it, the fact that after all it is only the phenomenal betrays itself. God exists just as we exist, in exercises only. "There is no more difficulty in forming clear and just conceptions of God's power, wisdom, goodness, and agency, than in forming clear and just conceptions of human power, wisdom, goodness, and agency. Power in God is of the same nature as power in man. Wisdom in God is of the same nature as wisdom in man. Goodness in God is of the same nature as goodness in man. And free voluntary moral agency in God is of the same nature as free voluntary moral agency in man. To say that God's agency is different in nature from our own is as absurd as to say that His knowledge, His power, or His moral rectitude is

different from our own. And to say this is to say that we have not, and can not have, any true knowledge of God." God's agency is as our own agency, with His whole existence in the single exercise for the period of its duration; phenomenal and fleeting from exercise to exercise; so that we are just as far from all originating source and connecting efficiency of the exercises as before. We have deluded ourselves by the use of a divine efficiency, as if it were a legitimate notion as source and connecting cause for our human exercises; but when we now come to rest upon it, we find it to be mere appearance and not being; a sense-cognition of the phenomenal and not at all an understanding-cognition of the notional; and the reeling philosophy must at once fall, or betake itself to some other and further advanced delusion of using the sense for the understanding. Such a philosophy can not possibly attain to a conception of the efficiency it so much uses. It calls it Divine efficiency—Deity; but it is used only as an originating source and connecting cause for human phenomenal acts. If it were validly attained it would be mere physical connective for the exercises; but as ultimately apprehended, it means only a higher exercise single and isolated, and equally as devoid of all possible conception of efficiency as the human exercise. There is no connective for mental action, either as human or Divine; and the very notion of efficiency, to say nothing of a free personality and independent Deity, is a surreptitious taking of a passing phenomenon in its place. Such exercises could no more be determined as an experience in time, than the exercises of our dreams can be connected in the unity of existence with our waking hours.

The *other* theory belonging to the same process in philos-

ophizing, and the last which we shall here feel disposed to notice particularly, is that which is advanced by Pres. Edwards, in answer to an objection against the doctrine of Original Sin. His acceptance of the doctrine of original sin, in systematic theology, is that of an imputation of Adam's first transgression to all his posterity in this sense, that in all there is a "liableness or exposedness, in the divine judgment, to partake of the punishment of that sin." The objection which he conceives as being brought against such a doctrine is, "that such imputation is unjust and unreasonable, inasmuch as Adam and his posterity are not one and the same." The objection is removed by affirming just the opposite, viz., that Adam and his posterity are one and the same; and then comes in the philosophical theory to which we here have reference, to show the identity of the race with the progenitor in the first transgression. With such identity understood, the punishment is apprehended as both just and reasonable, inasmuch as their action is involved as truly as his act. But without any concern here with the theological doctrine, we look only at the philosophical theory to account for the personal identity of all with Adam.

There is first a somewhat extensive reference to different analogies in the perpetuation of identity in other cases; as of a tree a hundred years old, and that tree as it first sprang from the ground; the adult body of forty years, with the body in its infancy; the identity in one person of the body and the soul; and perpetuated consciousness as throughout the same consciousness; after which comes a more explicit announcement of the theory. It is made to have a general application to the phenomena of both the material and the mental world. These phenomena are ever

separate and fleeting, and the difficulty is, as thus isolate, to account for their identity in any one thing. Thus we have the brightness of the moon shining in the clear evening sky, and that shining appears constant and in perpetual being. But when this is intellectually considered, it is manifest that nothing here is permanent; but that all is only a repetition of coming and departing appearance. The rays in one instant of the shining are not those of the next instant. A new effect comes into being with each successive moment of the shining, and this coming and departing of one new effect after another is the same in all its qualities; in the gravity of the moon as in that of its shining; and this also in the case of all the phenomena of an outer world. All nature is but a continual repetition of new creations. Nothing is for a moment the same, but its perpetuation is a continual repetition of new products. That there is any perpetuity to any thing depends wholly upon perpetual creations, and identity of object in any thing is an arbitrary establishment of the Deity. A divine constitution is given to nature in these incessant and orderly new creations. The sameness or identity of any thing, from time to time, consists solely in the keeping of an onward flow of these new products. Nothing is the same in nature from one period to another, but just as the flowing river is the same; a continual coming and departing of the new elements of which the thing is constituted.

By the like arbitrary establishment of the Deity through a perpetual Divine efficiency, the personal identity of every human being is constituted. One mental phenomenon departs and another comes, just as the efficiency of God keeps on the perpetual series; and inasmuch as this is the sole

ground of all personal identity, nothing hinders that this perpetuated divine constitution should run on from one person to another, and up through all persons to their first parent. No man would be the same from hour to hour, and on from year to year, except for this divine constitution; and this may just as well give identity from age to age as from year to year, and to all individuals of the race as to all the phenomena in each individual. This is what gives to the human race its unity, and humanity is thus constituted one identity through all ages. The first transgression is therefore an act belonging to all, and, as sinful, throws its guilt and liability to punishment upon all; inasmuch as in this divine constitution an identity is perpetuated, making all to be truly one.

How clearly is all this method of philosophizing based upon the principle of bringing in the conception of a supernatural to perform the part of a notional in the connections of the understanding. Phenomena are taken as the true being, and a divine efficiency connects them; and this not only in nature but in personality; and not only in one person but identifying all persons. How shall such an efficiency be attained except as a mere assumption? How shall its own connections in any identity be determined? How shall phenomena be determined in the experience as in one space and in one time, without shutting up this connecting divine efficiency also within the determinations of space and time? The Deity must in this way be degraded to the phenomenal. And in the same manner may we detect the fallacies of all philosophizing, where the phenomenal is forced into the place of the only true being, and the notional is discarded; or the supernatural is made to take its

place, only in the very next step to be forced in subjection to the constructions of the sense. The phenomenal can never be connected into a system of nature and determined in an experience in space and time, by any false playing off of the conjunctions of the sense for the connections of the understanding; nor by surreptitiously introducing a Divine efficiency, which can itself have no other predicates than the *a priori* elements of quantity.

We may, then, affirm the partiality, incompleteness, and thus the error of all philosophy which deludes itself by an ambiguity, on either side, of elevating the sense into the region of the understanding or of degrading the understanding to the functions of the sense. An amphiboly necessarily follows, and the ball is tossed from one hand into the other, as every changing step destroys the balance thus vainly sought to be preserved. Certainly, with very few exceptions, philosophy from its earliest history has kept itself one-sided on one or the other of these extremes; and to help itself out of its difficulties, either nature has been made God or God has been made nature. The English mind has best maintained its balance, since the great lights of Grecian philosophy in Plato and Aristotle have been obscured or perverted, and this not so much from the clear and intelligent apprehension of the manner of doing it, as by an almost instinctive mother-wit or good judgment, sometimes called common-sense, which forbade the putting of all things upon either foot at once; and feeling the awkwardness of all such attempts, it has striven at least to make its philosophy stand on both feet. Cudworth has introduced his conception of "*a plastic power*" into nature; and this, though neither a space-filling substance nor a time-filling source;

neither successive cause nor simultaneous reciprocity; yet, as a connective notional in an understanding, merely general and which might be made to accomplish what any occasion for its use should require, has preserved his intellectual system of the universe from falling into the gulf on either side, through an annihilation of the sense, or an emptiness of the understanding. It gave a real dynamical connection to the phenomenal universe, though with no possible determinate order *à priori*; and his whole atomic contrivance is just so much surplusage, inasmuch as all notional connective is supplied in the "*plastic power*," and the atoms become the mere "chips in the porridge," the philosophy being wholly made up without them.

So, also, Newton's good judgment, cleaving to facts rather than speculation, and taking these in their intellectual laws rather than merely observed appearances, kept both the constructions of the sense and the connections of the understanding in their proper spheres, and performing their proper services in the cognition of universal nature; but without any apprehension of an *à priori* psychology, which gave to each their necessary and universal conditions. The notions of substance, cause, and reciprocal influence, were understood to be the laws in nature, while the diagrams in pure space and time gave the intuitive forms for all phenomena; and thus was a nature of things truly constituted, with no ambiguity of either the functions of the sense or those of the understanding. And so more emphatically with the philosophical genius of Lord Bacon; accurately distinguishing the laws and forms in nature, from all qualities and events in appearance; and thus perfectly separating the work of the sense, from all operations of the understanding; analyz-

ing nature intellectually and not chemically; it has established forever the highway of all inductive science, though all unconscious of an *a priori* road which, in its misapprehension, it affected to despise as emptiness and absurdity. The idealism it condemns is that which its own good judgment taught itself to shun—a mere arbitrary hypothesis; not that which has its ideals in the conditional laws of all thought, and which must necessarily be in nature, if nature herself may be subjected to a determined experience in space and time.

We here complete the First Chapter of the Understanding, having attained it completely in its Idea, and also seen how, in the light of this idea, we may detect the errors of false and defective processes of philosophizing, in those very points where the fallacies originate; because they are seen to depart from the primitive elements of all possible connection, and to violate the conditional principles of all thinking in discursive judgments, and thereby render themselves helpless in all determination of an experience in space and time. But, as yet our attainment is only an Idea.

CHAPTER II.

THE UNDERSTANDING IN ITS OBJECTIVE LAW.

SECTION I.

SPACE AND TIME, EACH AS A WHOLE.

THE Function of an Understanding is to so give connection to the phenomena gained in the sense, that they may become an order of experience determined to their places in space and to their periods in time. Our *à priori* idea of such function that may operate such a result, has been found to include the notion of constant substance as ground for connection in space; perduring substance as source for connection in perpetual time, consecutive cause as efficiency for connecting in successive time, and reciprocal cause as condition for connecting in simultaneous time. This is subjective Idea, or possible understanding only; for demonstrative science it is still incumbent that we attain a Law in actual facts, the correlative of this idea, and in such determine the real operation of such a faculty.

In effecting this, we shall take our attained *à priori* idea for the present as hypothesis only, and will apply it to actual facts in a sufficiently broad induction to induce full conviction that our necessary and universal idea has its counterpart in a veritable law of intelligent action. We shall need to

gather facts in respect both to the determination of an experience in *one whole* of space and of time, and the determination of it to *particular places and periods* in this one whole of space and of time. It will be requisite to appropriate a section to each.

That we in fact do determine experience in both ways, is manifest from our forms of expression and the universal adaptations of language. We speak of a universal Space as inclusive of all spaces, and in which all experience is in the same one space. So, also, we speak of a universal Time inclusive of all times, comprising *eternitas a parte ante* and *eternitas a parte post*, and in which all experience of ourselves or others is embraced. We speak of space as one void expanse, which in its immensity gives place for all phenomena; and of time as one open duration, in which is period for all events. We talk of the unfolding and unrolling of time; that which has been as already spread out, that which now is as just opening, and that which is to come as yet shut up: and so also of the stream of time, all the parts of which pass any one point successively; and of the ocean of time, which, as one all-embracing flood, bears all events along together. Space is thus a whole enclosing all spaces, and not an ever-growing conjunction of parts; and time is one whole embracing all periods, and not an endless adjunct of portions of time. We speak, moreover, of experience determined in its particular places, as of the map of human experience in which all phenomena have their place; and also determined in its particular periods, as of the chronicle of human experience in which all events have their own order of occurrence.

With the fact manifest in all forms of communication that we determine experience both in a whole of space and

of time, and each fact of experience to a particular place and period in this whole of space and of time; we have this as the end of our present investigation, to answer the inquiry—How is this effected? Do the facts in the case show that such determination is made under a Law, which completely corresponds with our *a priori* Idea? This we must make to be apparent, both as determination in *one whole* of space and of time; and as *particular* in place and period.

SECTION II.

THE DETERMINATION OF EXPERIENCE IN ONE WHOLE OF SPACE AND OF TIME.

WE will here make an induction of facts, which will be seen to come under the conditions of our hypothetical idea, viz., that we determine an experience to be in one universal space and time, *through the connections of the phenomenal in a notional*. We will take an experience in space and an experience in time separately, inasmuch as the facts in each case must be of a different class and indicating a peculiar notional connective for each; that of experience in universal space, conditioned upon the connection of space-filling substance, and that of experience in universal time, conditioned upon the connection of time-enduring source. The substance is known as space-filling, by the apprehending of a constant impenetrability in the same place; and as time-enduring, from the perduring of this impenetrability through its different places, or its altered phenomena in the same place.

1. *Experience in Universal Space.*—Let us *first* take the facts given in our *pure intuitive reasoning*. It would be the same in numbers as in the pure diagrams of points in space; but the illustration will not be so perspicuous from the use of numbers, as from that of definite pure figures in space. When I construct any diagram by my sole intellectual agency in self-consciousness, I have in the apprehension of the pure diagram necessarily the apprehension of a place also. Every repetition of the constructing of similar pure diagrams is necessarily connected with the apprehension of a place for each completed construction. Our facts, therefore, may here be multiplied to the extent that we can have different constructions of pure diagrams, all giving an apprehension of a space in the fact of their own pure apprehension.

But none of these pure spaces are determined as in one universal space. One construction is produced and dismissed after another and at different periods intervening, and as the pure diagram departs from the self-consciousness, the place apprehended also departs with it; inasmuch as neither the diagram nor the place had any significancy except in my subjective consciousness. We can by no means determine that these places are in one universal space, and only determine from the primitive unity of our self-consciousness, that they have been constructed and apprehended by one self. There is no constant substance, as space-filling, whereby to determine constant sameness of place, and we do not, therefore, determine different constructed pure diagrams in their places to be in one and the same universal space.

Much less is it practicable to determine the pure dia-

grams constructed in different self-conscious subjects and their apprehended spaces to be in one universal space. The constructing agency is conditioned only by the scheme in the productive imagination in each subject; and we do not determine one man's pure diagrams in space, to be in the same universal space with the places of another man's diagrams. We can not say that the triangles, circles, etc., of one, are the same as those of another; nor that they are together in the same one whole of all space; inasmuch as there is no one space-filling substance, which occasions the constructions in all persons to be of one thing, and in one and the same place, and this in the one universal space. The law for *construction* is here found, but the law for *connection* is utterly wanting; and hence, while we have the intuition, we can have no judgment in the understanding, and while we have a subjective experience, as seeming phenomena, we can have no connection of these seeming phenomena into an experience determined in one universal space.

We will *next* take facts in mere *organic affections*.—The organ of vision is the most appropriate, though sometimes facts of the same class may be found in the organ of touch, or that of sound. It is practicable, by a pressure on the eye-ball, to attain changeable floating colors in our self-consciousness, and which keep up their appearance for a longer or shorter period. We may construct them into figures more or less definite, and though often unlike any shapes of reality, they yet have their places and relationships each to each. Some permanent organic defect or injury may make such affections permanent, as in cases of clouded spots and rings in the sight, and moving appearances as if of some discoloration in the humor of the lens, known as

volitantes muscipuli; or perhaps, for a few moments after having turned the eye aside from an intense light; or the dreadful phantoms of some brain affections, as in *delirium tremens*. In all such phantasies, we have as truly the apprehension of a place, as we have of the shades or colors which come and go as organic illusions; but inasmuch as the affection is simply organic, and having no significancy except for the self-conscious subject whose organ it is, such illusions and their places are as wholly subjective as the pure diagrams of mathematics. They are not conditioned in their construction by any scheme in the productive imagination, but altogether from the affection in the internal state of the organ; and as these change or are permanent from the state of the organ, and not from any occasion in a constant space-filling substance, so we never determine such places to be in one universal space, nor that the places at different periods of the appearance are the same places. And much less do we determine the places, in all the different self-conscious subjects of such affections, to be in the same universal space. The occasion for a construction in figure is given, because the conditional law of all conjunction in unity is here; but the conditions for a connection in the judgment of an understanding are not here given, and we can bring no such experience within the determination of a universal space. All such facts are fully explicable from our hypothetical idea, and prove it to be the law for the determination of experience in one space.

We will *again* take facts occurring in *reflected vision*. The same illustrations might be found in reflected hearing as an echo in the sense; but inasmuch as hearing has the conditions for only a very imperfect construction of space,

it can not be made so convenient for our design. We have appearances in vision from any medium that may subserve the purposes of a mirror—the calm surface of a lake; the prepared plate of glass, with its quicksilver coating on the backside; or some metal with its highly polished surface. In any such arrangement, the occasion is given for a content in the sense, and the construction into definite figure is complete, and readily effected. In all such constructions, a space is apprehended as necessarily as the figure constructed in the consciousness. But this space is significant only as relative to the particular mirror. The mirror is conditional for it; it is produced in it, and destroyed in its destruction. There are as many different spaces as mirrors, and it is impracticable that there should be one universal space embracing all mirrored spaces. Such appearance is objective, inasmuch as the mirror is no part of the subject-self but occasions the same appearance for all subjects of self-consciousness in the same circumstances; and thus the space is objective and independent of the peculiarity of the subject apprehending it, and is the same space for all self-conscious subjects of it. But though objective and the same space to all that may apprehend it, yet is it space in that mirror only, and not the same space with that in any other mirror; since the removal or destruction of the mirror abolishes its space, without any interference with other mirrored spaces. We may thus very well speak of the definite figures in the same mirror as all appearing within the same space, for there is the constant substance of the mirror through which to connect at each different period of observation and for every different observer. But another mirror has its own space, for each period of observation and for every observer; and

it would demand an including mirror of all mirrors, to bring the spaces of all mirrors into one universal mirrored space. And precisely because there is no such all-embracing substance, which, as universal mirror, might hold all mirrored spaces in itself, there can be no determined universal whole for the spaces in all mirrors. It is thus impossible to determine the experience in reflective vision in one universal space; and this precisely in conformity with our hypothesis; for, so far as constant substance may be thought in the mirror itself, there is one whole of space, but because a constant substance underlying all mirrors can not be thought, therefore the spaces in all mirrors can not be connected in one universal space.

And still further, the mirrored space may be considered in reference to the space in which the mirror itself is. Each mirror is itself in a space and has its own space in itself, and the space within the mirror can not be the same space with that in which is the mirror itself; for the removal or destruction of the mirror is an abolishing of the space within it, but no interference with that space in which was the mirror itself. To make the mirrored spaces one universal space would demand a universal substance as constant mirror, which might contain all others; but such universal mirror would still demand its own place in which it might be, and could never identify the place in which it was, with the universal mirrored space that was in it. Were it true therefore, that an experience of reflective vision should be determined in a universal whole of all mirrored spaces, by the occasion of an including substance as mirror for all mirrors, it would still be impracticable to determine such experience in one universal space; for the spaces in which the universal

mirror must be, could not be thought connected in one space with that universal mirrored space which was in the mirror itself.

And still further, the space in which the mirrored appearance is, may be considered in reference to the space in which the phenomenon is, of which the mirrored appearance is the reflection. The reflected appearance is not the same as the phenomenon reflected, for the removal of the mirror abolishes the first, but has no interference with the last; and in the same way and for the same reason, the space in which is the reflected appearance is not the same space as that in which is the phenomenon reflected. Should some universal mirror, therefore, give all reflected appearance to be an experience in one universal mirrored space, we should not thus connect this experience in the same space with an experience of the phenomena reflected. The one, though universal of its kind, would still leave the other altogether unincorporated. The substance which filled the space and occasioned the phenomenon reflected would be no substance in the mirrored space of the reflected appearance, and on this account the two spaces can not be connected in a judgment of the understanding, into the same space. Thus, in all the many and very diversified facts of reflected vision, we find them all held in colligation by our hypothetical idea, as their actual law.

We will, in the *last* place, take the facts which occur in *open vision*. The illustration will be the same in any organism, that may give occasion for definite construction in space; but as the organ of vision gives such occasion the most perfectly, the facts connected with vision become the most appropriate for our purpose. Mere appearance in con-

sciousness necessitates the apprehending of a space; but mere appearance does not give an occasion for determining all as in one space. When I simply perceive the stars in their appearances, I see them to be in a space; and I may make constructions, that shall give me their bearing and distance from each other in that space; but something more than appearance must be given, as occasion for connecting them in thought in the one universal space. I can not perceive in the sense, but only judge in the understanding that all appearance is in the one space. If I sail on a smooth lake in a clear night, I may perhaps be wholly unable to perceive the surface of the water, so perfectly does it reflect all that is above it. In such a case I shall perceive the appearance of the stars above and beneath, and so far as perception is concerned I am ensphered in a heaven of stars, and the mere appearance can not determine for me which hemisphere is direct and which reflected appearance. It is only where in the understanding I fix the constant space-filling substance, that I come to determine this one to be the existing heaven and the other its perfectly mirrored reflection. And my determination of appearances in this one space is only as I think it to be filled with constant substance. The space-filling substance of the stars has been constant through the day, though the more intense sunlight has wholly absorbed their phenomenal being; and when they appear again on the succeeding evening, because their appearance is occasioned by the same constant substance, I judge them to be the same stars, and in the same space. So, also, when the voyager has sailed to the opposite side of the globe and on the opposite side of the equator, he perceives a heaven in which the stars have wholly another ap-

pearance; but he judges them all to be in the same one space, not because he so perceives them, but because he conceives a filling of space by some existing substance from the place of the stars in one hemisphere to the place of the different stars in the other. A chasm of all substantial being as notional space-filling force would cut off all communication from one phenomenal world to the other, and we should be unable to determine them in the same one space, but only as each in its own space.

All the facts, both as negative of a connection in a notional and as positive for such connection, come together in our hypothesis—that we never determine experience in one universal space except in the thought of a connective notional, and always when we have such connection. No fact can be found in any experience determined in one whole of space, that may exclude itself from the colligation of this universal Law.

2. *Experience in Universal Time.*—I can have no apprehension of the passing of a time except through some modification of my internal state. When that varied modification is going on, a time is apprehended as going on in my consciousness; as that is quickened or retarded in its flow, the apprehension of an elapsing time is faster or slower; and as all such modification of inner state ceases in consciousness, all apprehension of a time ceases in consciousness likewise. It is, thus, ever the fact that some modifying process is going on in the internal state, and this apprehended in the light of consciousness, or we do not consciously apprehend that a time is passing; and that we do apprehend the elapsing of a time, in conformity with the flow of such varied modifications of inner sense. This fact

full in our apprehension will facilitate the acquisition, and ready application, of many other facts to our present purpose.

We will *first* gather some facts in purely *subjective experience*. There are many instances of an experience going on wholly within our own minds, and in which we are ourselves our own world. The inner sense alone is active in perceiving and constructing a train of passing events as they take place wholly within our own subjective being. This may be a passing of one emotion after another, or one thought after another, or perhaps a varied flow of thoughts, emotions, and purposes which stand only in our consciousness and pass only in our inner sense, while all attention to any thing external is withdrawn. In such a case there is the consciousness of an elapsing time, but as it has been apprehended only in relation to the coming and departing of the inner events, its correspondence with the time which has been going on in the flow of passing events external to us has not been at all regarded; and as we have had no apprehension of the external events and the time of their flow, it is impossible that we should put one within the other and determine them to the same one universal time. We are obliged, when we are roused from our subjective thinking, to recur to some standard which indicates how the flow of passing outward events has progressed, and thus determine the period of our musing by putting it within a definite period of an objective flowing of events; and we are sometimes greatly surprised at the ascertained disparity between them.

We may suppose some pure geometrician as Euclid or Archimedes, or some Newton or La Place constructing his

pure diagrams of the heavenly movements, and so wholly intent on the intuitive processes which are going on in his own pure creations, that the phenomenal events of an outer world are utterly lost to the consciousness. To such a mind, absorbed in its own action, there will be a progressive modification of the internal state as the process of pure construction and intuition goes onward, and thus consciously a time is passing ; but the only time apprehended is that in which this inner agency may be brought, by constructing into definite periods the instants in which it has stood or the moments through which it has passed. Were there no other conception of the modification of an inner sense but such as was subjectively experienced in its own constructing agency, we should have a time but it would be our own subjective time only ; nor should we be able to say that it could be at all within any universal time of an objective duration. When the philosopher awoke from his profound study and went out from the consciousness of an inner sense to the consciousness of an outer movement, he would be wholly unable to identify the subjective succession with an objective duration, except as he could fix on some constant substantial being as a source of successive changes in the alterations of its phenomena, and from that determine how an objective time had passed since his subjective time had been going on, and thus putting the period of the latter within the definite period of the former.

While it thus is manifest that time subjectively can have no identification in an objective time ; except through the determination of the one within the other by the connections of phenomenal events in a perduring substantial source, so it is the more manifest that the mere passing of a time

in subjective consciousness can never be determined in any universal time. My inner agency in its modifications of my internal state is subject to perpetual interruptions. When it is in process, then a time is passing; when it is interrupted, then is the flow of time in my subjective consciousness broken up; and it is not possible that I should conjoin the periods as in one time across these breaches. Within my subjective experience there has been only passing periods as I have been conscious of the varied internal modifications of state, and those separated by intervals when no subjective time was passing; and surely, without some perduring source marking its changes in perpetually altered phenomena, and which I can never find in my subjective being, I can never connect these separate periods across their fathomless voids of all time, and determine them to belong to one universal whole of all time. To my subjective experience they are so many separate times. And I have nothing in me, as the subject of their self-conscious apprehension, by which I can connect them all in one universal time.

Other subjects of self-consciousness may by their own inner agency be modifying their own internal states, and coming to the consciousness that a time is thus passing on in their inner sense; but there is nothing to connect the periods in their interruptions into one time in each self-conscious subject, much less any thing to connect all their periods into one universal time for them all. There must be a perduring source, whose changes shall be marked in continually coming and departing phenomena which arise as events from it, and thus give a continually flowing time objectively as common standard for all their subjective

times; and only thus may all be determined in the same universal time. No one subject can connect his own periods across their frequent interruptions by any permanent standard in his own subjective being. And neither one nor all can bring the periods of their separate selves into one time, from any common standard found in their subjective being, nor is this in fact ever done but by referring them all to some permanent objective source of changes. There would be as many times as there are subjects of self-consciousness, did we not determine our own and each others times by some permanent objective notional, which as substantial source connects the changes in their periods and gives one time for us all.

We may *next* take facts in our *subjective organism*. If we confine the modification of our internal state to the coming and departing appearances or the motions in some delusive organic affections, we shall attain a large class of facts for our purpose. The deceptive phantoms before mentioned in some diseased or deranged organ—as the colors from the pressed eye-ball, or a ringing sound in the ear, or a pain in the nerves—would give occasion for a constructing agency and thus for a modification of internal state, and thereby secure the consciousness of a passing time. But inasmuch as this sensation originates in the organism, and gives occasion for the self-conscious possessor of the organ only to be thus internally affected, the passing of the time can be of no significancy beyond his subjective being, and as exclusively his own time as above in the purely mental movements. So far, therefore, as there are such periods in organic experience, they may furnish their facts for our purpose.

Perhaps the facts of dreaming may here give the best

Illustration. A dream may be taken as a sensation in our subjective organism generally, inducing such intellectual construction as the state of the organism occasions; and such, though only of the reproductive imagination, do yet induce a modification of the internal state, and thus the conscious passing of a time. But none of us can bring the times of our dreams into one connected whole of a dreaming time for ourselves subjectively, much less put all the times of all dreaming in all persons into any one time, or identify the times passing in our dreams with our objective universal time, only as we have some substantial source for phenomenal successions, and subject the times of our dreams to this one common standard which marks the progress of one universal time for all.

We may *lastly* take the facts of any *real phenomenal experience*. My perceptions of phenomena through any organism are, so far as they are appearance in my consciousness, subjective only. The color, the sound, the touch, the taste, and the smell, are all in me subjectively; and the modification which their distinction and construction in consciousness occasions in my internal state gives the consciousness of a passing time, but this phenomenal passing in its periods is in my subjective consciousness only. I am not conscious that such modifications and such periods are passing in others. This would demand that the others consciousness should become phenomenal in my consciousness. I have my own phenomenal coming and departing in consciousness, and another subject may have his; but no consciousness of either can put the interrupted periods of one subject into one time, much less the periods of the two subjects of self-consciousness into one common time. Every

subject judges that what has occasioned his perception of the phenomena is the same permanent substance occasioning the like perceptions for all; that the changing events originate in a source which is a common occasion for perceiving the same series of events by all; and that the occasions for modifications of internal state are given alike to all; and thereby the periods are the same to all, and are connected in the same one time for all. The substantial time-keeper gives the phenomena of moving hands over the dial-plate, and the tick of the seconds, and the periods of them in their series, as a standard for common experience; and although the perceptions are only subjective and separate in the sense, yet the permanent sameness of substantial source in the thought connects them all in one nature, and in one time. Thus, in all the above facts is the colligation of our hypothesis verified as universal Law.

SECTION III.

THE DETERMINATION OF AN EXPERIENCE IN ITS PARTICULAR PLACES AND PERIODS.

ALL experience is but a medley of appearing and disappearing phenomena, except the phenomena are determined in their particular places and periods. And that we do judge phenomena to be each in its own place and period in universal space and time, and determine their relative bearings and distances from each other, needs no illustration; since our experience has no connection in itself as a whole any further than such determination of particular phenom-

ena in space and time is effected. The point for investigation is, to find the Law in the facts for such particular determination. Will our hypothetical idea bind up within itself all the facts of a determination of particular phenomena to their places in space and their periods in time? If so, the induction will evince this to be their law; and thus that the understanding does determine the particulars of an experience in place and period, in accordance with our *a priori* idea of an understanding already attained. We shall, as before, take the particular determinations in space and in time separately.

1. *Particular determination of places in space.*—All the phenomena of experience, we judge to be in one universal space; and the law for this as already found in the facts is, the connection of these phenomena in a constant space-filling substance. We shall now show, that the law for all *particular determination in space* is the fixing of the phenomena in their relative spaces, by their inherence in the constant space-filling substance.

In all determination of particular phenomena in space there must be some movement. The place occupied must be determined in bearing and distance from other places, and we never take such bearings and distances without an intellectual moving agency which in its progress constructs the places and the lines between them. But no movement can be apprehended, except in reference to somewhat that is permanent. I only determine that I move, by a reference of myself to something which does not move. It thus becomes the condition in all determination in place, that we have some permanent stand-point.

But I find no permanent stand-point in my subjective

being. When I am conscious of an inward constructing agency producing pure figures in space, the *movement* is apprehended only in the passing of the agency throughout the diverse points in the primitive intuition. Subjectively, my pure diagrams have a relative bearing and distance from each other, but no determined relation to the places of any phenomena in universal space. Nor, from my subjective sensations any more than from my subjective pure intuitions, do I attain to any permanent stand-point. If I press my eye-ball and fill the organ in consciousness with the floating fantastic colors, they may have bearings and directions from each other, but they give no permanent point for determining themselves in universal space. And this would be precisely the same with our real sensations, were only the subjective sensations regarded. That I had a real sensation in touch, and this continued so that in my consciousness I attained the construction of some definite figure and thus a place in space; yet, if the perception in sensation were all that was given, I should not be able at all to determine where in the universal space that place was, nor what direction and distance from the place of any other construction by the touch. The result would be the same in the construction, whether the organ of touch moved over the resistance or the resistance moved over the organ, and the mere sensation would give no permanent stand-point from whence to take any bearings and distances. Sensation can give only the subjective; and the subjective can never attain to any permanency from whence to determine particular places in space. All the facts of our merely subjective experience are bound in this law, that we can determine them only in a subjective space, for that only has perma-

nency in reference to our subjective self; but what relation this bears to any places in universal space we can not determine, precisely because we can attain no permanent objective.

But, if now I take my own body, and think all the phenomena which it occasions in the sense to inhere in it as a constant space-filling substance, and thus that this body permanently occupies a place; I can in this determine the bearing and distances of all these phenomena inhering in the permanent substance of my own body, and say what are their relations in their places to each other. The direction and distance of the appearing head from the appearing foot through any sense of vision or of touch may readily be determined; because there has been given the permanent space-filling substance in the understanding, which as fixed position in objective space occasions its own phenomena to appear in their own relative places, as inhering in it each in its own place. Just so far as you fill a space with the permanent substance, you determine the relative places of its phenomena; for so far, and only so far, you have the hypothetical law for it.

But such determination of the relative places of the different phenomena of my own body, can determine nothing of the relations to any places in universal space beyond it. I can not determine my relative position in the room I occupy, by any permanent filling of a space with the substance of my own body alone. That will only avail to determine the relative places of the phenomena in my own body, and not the places of any phenomena beyond the space so occupied. I must first judge such phenomena to be the inhering qualities of a space-filling substance beyond and enclosing

my body; and I may then very well determine the relative places of the phenomena in my own body with those in the substance of the wall of the room in their particular places. All the hypothetical conditions are so far given, and so far a determined experience in particular places is effected. But still, all determination of place is confined to the space of the room, and we can not yet say where in space the room itself is. I look from the window of my room, and various phenomena appear to be moving past the space of the room which the window occupies; but I can not determine whether the space of my room and myself in it are moving past the outer phenomena, or whether the phenomena are moving past the window of my room. My room may be the cabin of a steamboat, and I readily determine the relative positions of all the places in the room; but I can not yet say where in universal space the phenomena beyond are, in reference to the place of my room. I may find them to be the phenomena of another steamboat, but I can not yet say whether they are permanent and we are moving, or the contrary; or whether both are not moving in opposite directions; or, perhaps both in the same direction, though one be more rapid than the other, and thus the more rapid passing by the other. Until I can attain some permanent space-filling substance in the judgment of the understanding—as a tree, a house, a hill upon the shore—which I at once recognize as occupying permanent place still beyond, I can not determine the relative bearings of any phenomena external to my own room. The permanent substance on shore gives occasion for determining the direction and bearing of all the phenomena intervening.

But facts in the same direction will still further confirm

our hypothesis to be the universal law ; for this permanent substance on shore may be still transcended. We can not tell where in space the phenomena on the shore are, except as we have extended our thought to the earth itself, as permanent space-filling substance, and determined its phenomena to be connected in it as permanent ground for their appearance, and thus as fixed at determinate bearings and distances from each other in their particular places. And then, if we would know the place in space of the earth itself, we have the higher stand-point to attain in the permanent space-filling substance of the sun, which determines all the phenomena of its planets and their satellites in their relative positions. And then, yet again, this planetary system can be determined in its place in space only by a higher permanent substance in the fixed stars, which considered as occupying each the same place in space beyond the region of our planetary system, may give the same law for the understanding to determine the place of the system as, in the first illustration given, the place of any part of my own body. And then, whether all the fixed stars are indeed fixed in the same invariable place in universal space, or are not perhaps themselves planets carrying each their unseen systems around some higher center, can only be determined by attaining such phenomena as evince their inherence in such higher space-filling substance. Our hypothetical principle is thus a universal law. The notion of a permanent space-filling substance, connecting all the phenomena in their relative places through their inherence in this substance, must be given, or no determination of experience in particular places in space is ever effected ; and at once, and always, where such connective is given, the determining

judgment in the understanding is readily and confidently made.

The point for an absolute determination of all places in universal space would be some fixed substantial center, which never changes its place by a revolution around some higher center; from which all centrifugal force goes out, and to which all gravitating force tends; and thus making the universe of nature to be one sphere of substantial being with its inhering phenomena ever occupying as a whole the same place in universal space. Shall we ever determine such fixed center, which unmoved itself yet ever determines all motion relatively to itself? Surely not from experience. No experience can possibly rise to the absolute in anything; therefore can never attain to an absolute determination of space. It can only determine the relative places within the space which is occupied by a permanent substance, and in which the inhering phenomena are fixed in their connection to their respective places. If we were placed upon the supposed absolute center to which all motion would have ultimate reference, it would be impossible for us to determine in experience our steadfast position. The understanding may *think* such a permanent stand-point; but place the sense there and it could not *see* if it stood, or whether it moved about some higher unseen center.

2. *Particular determinations of periods in Time.*—Time has three modes of relation to phenomena, and we need to gather the facts in each, and see if they all come within the circumscription of our hypothesis for determining particular periods in time.

(1.) Facts in the determination of particular periods in *the perpetuity of time.*—This general fact is every where

apparent, that there is not a perpetual apprehending of a time in any self-consciousness. When there is a progressive modification of internal state, we may be conscious that a time is passing; but when there is any interruption of the conjoining agency, there is an interruption in our conscious apprehending of a time. Such interruptions are frequently occurring in every experience. The intellectual agency is often so completely absorbed in other constructions, that we take no note of time. There are also reveries and musing meditations, paroxysms of delirium and fainting fits and the stupor of disease, and more especially the occurrence of sleep from the necessities of our animal constitution; in all of which, the consciousness of an elapsing time is interrupted. To our subjective being these intervals in our consciousness have no significancy, and are a void of time as truly as a void of all inner affection. Such chasms in any elapsing time effectually break up in our consciousness the perpetuity of time. It is nevertheless a fact that we somehow determine time to be perpetual, and to have been continually passing during these interruptions in our consciousness of all time, so that we as truly determine a period to our unconsciousness as to our conscious exercises. This can be no intuition of the sense, but must somehow be a discursive judgment formed in the understanding. If I am sailing with the current of a stream in my conscious apprehension, and am then wholly unconscious of any such movement through sleep or otherwise, and again awake in consciousness of the similar fact that I am sailing with the current of a river, certainly my interrupted apprehensions can not be so brought together, or the chasm of consciousness so bridged across, that I can *perceive* that I have been perpet-

ually sailing with the current, nor that the currents in the two periods of apprehension are the same perpetual stream. If I determine such facts at all, it must be through some discursive judgment in the understanding. I must *think* the connections of these experiences through some media, which as data lie beyond the subjective experience itself. And here all the facts, in our determination of the interrupted periods of our experience to be in perpetual time, will be brought into complete colligation by our hypothetical condition of a perduring source, as the time-filling substance to which the phenomena in their different periods all adhere.

Thus, after a period of activity in consciousness, I fall asleep in my study-chair. After this interruption of consciousness, I again awake and would fain determine the continuity of time in this interval when time had no significance to me. Certainly I do not attempt to make my intellectual agency pass through this chasm, and thereby construct the periods in consciousness that I may *perceive* a time has been perpetually passing. I have no diversity of instants in that interval of unconsciousness which I may conjoin in unity, and by this bring in conjunction the periods before and after, and thus make the time perpetual. I take a very different course; laying aside all function of intuition I seek to connect the periods only by a discursive operation of the understanding. I find some permanent source of varying phenomena which has existed through the interval, and whose coming and departing events have had their periods in this interval, and which have thus connected the periods through this subjective void of all time; and I at once conclude that time has been perpetual. Any such perduring

source for coming and departing events will give a datum for such a discursive judgment, and all the facts of a determination of the perpetuity of time through such a chasm will invariably rest upon it.

Thus, I may take my watch, which has been a perduring source of varying events in the movements of the different hands over the dial-plate, or the undulations of air from the stroke at each swing of the balance-wheel. Those events as phenomena have not appeared in my experience, yet has the occasion for such phenomena perpetually existed, and I must thus think them connected in their continual periods, varying as the changes in the source went on; and in the judgment of the understanding, I at once determine that a time has been perpetually passing, though in my subjective consciousness it had no significancy. I conclude thus, only in a discursive process that has gone from period to period through the notion of a perduring source in the understanding. As another fact, I may look at the falling sands through the permanent waist of the hour-glass; and though I have been all unconscious of the varying phenomena, yet is this perduring source of such successive appearances for any perceiving sense that might have been present in consciousness, a sufficient datum for the understanding to determine that the occasions have had their periods, and that the time has been perpetually passing. The shadow of the gnomon on the sun-dial may give another fact within the same conditions. The perduring source as notional in the understanding has been in existence through the interval of my unconsciousness, and given occasion for a continual perception of the moving shadow to any sense which might have received the content and have had its perpetuated time

through all the moments; and the void of time in consciousness is thus a perpetuation of time in the understanding. Only by such connection of adhering occasions in a perduring source, do we determine any particular period to be in a perpetual time.

And when no artificial chronometers are at hand, the same conditions are given in a thousand ways, each of which would be a new fact coming under the same hypothesis. Thus, I awake, and find the sunshine from my window has changed its position; or, perhaps the twilight of evening has succeeded to the clear daylight when my sleep commenced; or, the diminished warmth of my room from the neglected and expiring fire in the stove; or, the diminished light and exhausted oil in my lamp; any one of these or numberless other such occasions give the datum in a permanent source of continual variations for the determination in the understanding, that a time has been perpetually passing through all intervals of our unconsciousness. So in that void of all time to us which precedes our existence as self-conscious beings, or that which is yet to come beyond the present instant in consciousness, we readily determine a perpetuity to time and embrace all the experience of humanity in one perpetuity of duration. The permanent substances which give their phenomenal brightness in the heavens are lasting sources of adhering events for a continual experience, and thus become data for the determination of a perpetual time, which flows on in uninterrupted periods, independent of all consciousness of it. They are thus, what their Maker in the beginning designed they should be, "lights in the firmament of heaven to divide the day from the night, and that they may be for signs and for seasons, and for days and

years." As far as we may think the perduring source to exist with its occasions for the adhering phenomena to come and depart, so far we can carry out our determinations of particular periods in a perpetuity of time, and give the chronology of nature; but when that notion as necessary condition of all connection in time drops from the understanding, the vacant thought has nothing for its support, and all determination of perpetuity to time is wholly impracticable.

We thus affirm, that all the facts in an actual determination of particular periods to perpetual time, come completely within, and are wholly concluded by our hypothesis—that the connections of adhering events in one perduring source is the necessary condition for all such determination of an experience in perpetual time. We have in this no longer a mere hypothesis, but an actual universal Law.

(2.) Facts in the determination of particular periods in *the uniform succession of time*.—We judge time to be in uniformly progressive flow; that its stream does not turn back upon itself, nor wheel itself about in one perpetual cycle; and that it is not by desultory leaps, nor paroxysms of quickened and retarded movement. But when only the subjective apprehension of a time is given, we determine nothing in reference to the *ordered progress* of its movement. Our dreams may give an apprehension of successive periods in any direction; and our memories may follow back the tide of events, or begin at any past point and follow down again the old stream of our experience. Were there nothing but our subjective constructions of periods, our apprehension of time must be backward or forward, according to the contingent modifications of our internal

state by the constructing movement. There is nothing in the subjective consciousness, which may serve as a permanent from which to determine the absolute direction or the rapidity of the current of time. How, then, do we determine the particular periods in time to be in an ordered and uniform succession? The facts will all be bound up in our hypothetical condition—that an ordered series of causation alone gives the datum for the determination of particular periods as uniformly progressive.

Thus, as before, when I awake from my sleep, and would fain know how much of time has passed, I need to determine, not only as before that there has been a perpetual passing of time and which is effected by any perduring source of adhering events, but, moreover, now I need to determine that this perpetual passing of a time has been in an ordered and uniform succession. A perpetual movement from period to period might be as the pendulum to and fro; or, as the wheel on its axis revolving without progress; or, as the waves on the surface of the lake varied indefinitely; and there would be the notion of one perpetual source in which adhering events in their periods were continually recurring, and we might determine that all the periods belonged to a perpetual time; but we must have some other data for determining that all the periods are in one uniform progress, as an ordered and even succession of time. When I look at my watch to determine *how much* time has passed, the datum which I get for my judgment is not merely that the substance is source for perpetual coming and departing events, but, moreover, is cause that the events can be only in one order and in uniform rapidity of succession. It is the abiding source and its events which suffices for perpetuity

of time, but it is the series of cause and effect which can alone suffice for the determination of an ordered succession of time. If the watch might go either backwards or forwards, or in a progressus of irregular rates of movement, there would be no datum for determining the onward flow of time, and none for determining uniformity of process by it. Thus with the hour-glass, the sun-dial, or any other artificial chronometer; we take the notion not only of a perduring source, but also of an ordering cause, necessitating the source to give its altered events in uniform succession. So far as we attain such a datum, we possess a chronometer; and so far as there is any deficiency in these conditions, the capability of an accurate determination of successive time is defective. I may know that my stove has been gradually diminishing in warmth while I was sleeping, and thus the cause of the gradual settling of the mercury in my thermometer; and in this case I could determine the movement of the mercury and its periods to be in one direction, and so far it would be chronometer for the progress of time. But, I must also have the datum of uniformity of causation, before I can make it chronometer for the rapidity of time. Any notion of causation is sufficient in its varying events to determine a progressus of time, but only uniformity in the variations can make it practicable for us to determine the uniform successions of periods in time.

Thus, although we readily determine that time is a progressus and never a regressus, we attain to only a comparative and not an absolute determination of the even flow of time. We find it necessary to bring every chronometer to some comparative standard of an ordered series of causation. The great standard is the revolution of the earth on

its axis. Taking the earth as perduring source of the varied phenomena, and the cause of its revolutions as ordering the same in progressive and equable successions, we have the great chronometer by which all artificial time-keepers are to be regulated. As this revolution of the earth divides itself into the two portions of light and darkness, so it has been found convenient to give to the ordinary chronometers two revolutions to one revolution of the earth, thereby separately measuring the day and the night. An hour-glass may take any equable division of this as a twelfth, and be truly an hour-glass; or a twenty-fourth, and be a half hour-glass. But in all the datum is the same—a causation ordering successive phenomena in accordance progressively and equably, with the revolutions of the earth. And now, that this is perpetually progressive is readily manifest. The causation is ever onward and not backward. One point of the earth's surface comes under the meridian after another, and these points can not alternate in the periods of their coming to the meridian, each with each. We thus determine the periods to be progressive and never regressive. But inasmuch as the movement is a revolution, and each day repeats its causal variations in the same order; how do we determine that time has any other progress than a repetition of cycles? The facts bring us again within the circumscription of the same hypothesis. Had we no causation but that which orders our diurnal revolution, we should not be competent to determine our regular progressus in time, and each day would be to us the old day over again; as with only a whirling balloon in the open air of heaven, each turn would to the aeronaut be in the same place. But as a sight of the objects on the earth would give the data for determining

that his revolutions varied from place to place, so do the thousand onward moving events give the data for determining that the diurnal revolutions of the earth vary in their periods, and are each a time further on in the opening of eternity than the last. The on-going of the objective events in nature are right onward from day to day, and not wheeled into cycles as the earth rolls on her axis, and thus each day though a periodic revolution has a different period from its predecessor. Were all the causes in nature only repeating a certain circuit, and coming about again as in a vortex only to go over again the same effects in the same order, their experience could only induce the repetition of the same circuit of inner modifications, and time could be determined only as a perpetual revolution in the same cycle. So also, should nature at any moment cease the onward development of cause and effect and turn directly back upon her order of connections, making every where what had been the consequent to an antecedent to become the antecedent to the same, the determination of time could only be that of a regressus, and yesterday would return again to our experience, and life roll itself backward through the consciousness in an exactly reversed order of periods as of phenomena. But, while the earth repeats her revolutions, the causes in nature do not turn from a direct on-going in their developed effects, and we in these attain our data for determining that every recurring day is a new day further on in the period of time, and not the same day repeated, nor a return again to the old day which had passed. The successive progress of time is thus readily determined from the successive on-going of events.

But an absolute equality in the onward progress of time

is not thus determined, nor indeed can in any way be determined from any possible experience. Here are facts so much aside from the class before given, and which would so little have been expected to come within the same connection, and yet which do surprisingly evince themselves to stand bound in the same hypothesis, that they may be well considered as an example of a consilience of facts leaping within our hypothetical condition from a distance—and thus add the stronger confirmation that our hypothesis is the universal law for all determination of successive time in an understanding. Thus, I may very well determine that the pulsations at my wrist go on in an ordered succession, for I have a perpetual cause in the palpitating heart for successive pulsations in their progressive periods. But I can not say that the pulsations and their periods are equable in their successions, precisely because I can not determine that the development of the causation into effect is equable. The phenomena as effects come into experience, but the notional cause can never come into experience. I may trace the phenomenal pulsations up to the alternate action of the heart in systole and diastole, and determine that this contraction and dilation is in successive progression, for I think the same cause for this as phenomenal effect that I do for the pulsations; but yet it is only the phenomenal that has come within consciousness, while the causal efficiency is necessarily notional in the understanding and can never be made appearance in the sense. I have no means, therefore, of determining the absolute equality of the succession in the cause, and can only attempt such determination of equable succession in the effects. I compare the phenomenal effects with those in another series of cause and effect. I find, or

comparison with the on-going phenomena of my watch, that the pulsations for one minute are, say seventy-five; and, in some minute of another hour, I find them to be less or more, say seventy for the less and eighty for the more numerous. How shall I determine which successive periods are the true successions in time? Only by taking the causation in the one case or the other to be an assumed equable efficiency, and thus judging the phenomenal effect of that to be equable in its periods, and then determining the phenomenal effects in their successive periods in the other compared with that as a standard. If my watch is taken as having kept on its equable efficiency in developing its successive effects, I shall determine that the pulsations have been faster or slower in the different periods, from some inequality of causation in the heart.

But, how determine that the causal efficiency of the watch has been equable? I may compare it with the falling sands of an hour-glass, or the oscillations of a pendulum regulating the descent of the same weight, and may assume that the efficiency of gravitation is an equable cause in the same place on the earth, and thus, if the watch agrees thereto, that its efficiency has been uniform. But, if now I should compare that watch, thus tested, with a sun-dial through the year, I should find perpetual inequalities of movement faster and slower than the dial, varying in extremes of fifteen minutes, and making the difference between mean-time and apparent-time on any given day in the year. How shall I determine where is the equable efficiency now? The watch has been tested by the constant efficiency of gravitation in nature, and yet it disagrees with the revolutions of the earth in their periods, which are the

phenomenal effects of the same causal efficiency. Is the same cause in nature contradictory in its own effects? But all these conflicting phenomena leap together within the same conditions, when we know that the earth is running its elliptical course about the sun, and varying its rate of movement proportionally from perihelion to aphelion, and that thus its equal revolutions on its axis will bring the same place on the earth to its meridian, at different intervals, in different parts of its orbit, and to just the degree and on the very days of the year indicated by the facts of disagreement between the clock and the sun-dial; and that, therefore, those different days in the year are just so much longer or shorter in their periods in absolute time. We determine the equable succession of time on the hypothesis only that the higher causation of gravity, in its force from the sun, is equable in its production of effects at equal distances.

It might here be said, that for all which has yet been determined of the equable succession of time, there may notwithstanding be as wide variations between a correct chronometer and some years, as between this chronometer and some days in the year. And so it may be. And if this were so found as a fact from any comparison of widely different years with the same accurate time-keeper of centuries, it would only the more confirm our hypothesis; for we could only determine the equalization of the discordant times, by taking the higher stand-point of causation, and thinking our sun, with its whole attendant system of worlds, to be wheeling on in its grand ellipse around this causal efficiency in one of the foci of its orbit, and conditioning the same disparity of years in this great cycle, as before of days

in the annual circuit of the earth in its orbit. Nor should we then be any nearer the attainment of an absolute measure of time. The only position for such determination would be the absolute center of all gravitation, fixed in its one position in the immensity of space, and ensphering and revolving all phenomenal being about itself. And if we stood at just such central point with an eye to perceive the rolling universe about us, how should we see that our own position did not move in absolute space? How see that the revolutions were not unequal in absolute time? Causation may be producing the faint pulsations of an artery or wheeling the universe on its center; but in all cases it is the connected series which determines the periods to be an ordered progress in time, and the even working of the efficiency which determines the equable progress in the successive periods. We have, therefore, a sufficiently broad induction of facts to determine that our hypothetical condition is a universal Law, and needs to be held as hypothesis no longer.

(3.) Facts in the determination of particular periods in *simultaneous time*.—We have varied phenomena each in their own periods, and which are alternately appearing and disappearing in the sense, so that when one appears the other has disappeared, and when the last appears again, the first has also again disappeared; and, though they are never given in consciousness together, we yet determine them to be together in the same time. This can not be from thinking them to be the adhering events of the same source: for that can only determine them in the judgment as perpetual in the same one whole of universal time, not that they are together in the same one period of universal time. Nor can

it be from thinking them to be the dependent effects of the same cause; for that can determine them only as successive in the universal time, and thus they can not be simultaneous. Since, then, the perception never brings them into the conscious experience, simultaneously, and no datum yet considered gives them in the judgment of the understanding as simultaneous, the inquiry yet to be made is—under what law do these facts of a determination to particular periods as simultaneous events arrange themselves? Our hypothetical condition is—that they must be connected in *the communion of a reciprocal influence*. This last induction of facts will exhaust all our hypotheses for determining particular periods in time: and if the hypothetical condition be found to be the actual Law, our task will be completed.

Thus, when I have the phenomena of continuous motion over the graduated points on the dial-plates of two clocks, in such a position that when I perceive one the phenomena of motion over the other is not perceived, and thus, alternately; I may say of each when thought to be events from a perduring source, that their periods must belong to one perpetual time; and also, when thought to be effects from an ordering series of causation, that the periods in each must be in progressing succession; but, as I can not see the phenomena of motion in both together, I can not perceive the moments of motion in both to be simultaneous; nor can the notions of perduring source and perpetual cause enable me at all to determine, that the motions in both pass any given points in both at the same moment. But if now these phenomena of motions over the graduated points of the two dial-plates are apprehended as on opposite sides of a tower, and that they are the two faces of the same chapel-

clock, and have each a communion reciprocally, so that one can not be modified in its motion but the same modification must be communicated also to the other; I have then a datum in the understanding by which I may well, discursively through this datum, determine that their movements are simultaneous. With such a reciprocity of influence I can, and without such I can not, and in point of fact it is only by such that I do, determine any phenomena of alternately perceived movements to be simultaneous.

I may touch the opposite scales of a balance, or the counter-weights suspended on each side of a pulley alternately—and the same will also apply to alternate vision, or perception through any organ of sense—and my apprehension may be, that when one scale or one weight has been raised the other has been found lower down, or the reverse; and if I had nothing more than the alternate perceptions in the positions of the phenomena, I could not determine whether these alternations of place were successive or simultaneous. The interval in perception will admit, that the displacement should be either in a successive or a simultaneous time. If I should somehow get the notion of two alternate causes each producing its own effect, one lifting and the other depressing the weights; this notion of alternate cause in the understanding would necessitate the judgment, that the displacement was also alternate and thus successive; but when the notion of the communion of reciprocal influence is assumed in the understanding, so that the action and reaction must synchronize, the judgment must conclude in the simultaneous displacement of the weights. And precisely the same hypothesis applies where no phenomenal connection, like the scale-beam or the pulley-rope, brings

the communion within the intuitions of any organism of sense.

Two voyagers, at opposite sides of the earth, find each a high tide in the ocean, but surely no human perception can settle the determination that they are contemporaneous. An accurate chronometer, when the two men should subsequently meet and compare their experience, might be the medium for determining that the tides were simultaneous; but the accuracy of the chronometer must ultimately be tested by its comparison with the action and reaction of gravitating bodies in the diurnal revolution of the earth. And such notion of the reciprocal influence of gravitating forces, acting and reacting upon the ocean according to the positions of the sun and moon, exclusive of the chronometer, would be sufficient for determining the simultaneousness of the tides by each man at once and in his own place. This wholly imperceptible force of gravity is, as notion in the understanding alone, an efficient connective of the phenomena; and as valid a condition for the judgment of contemporary being in the tides, as if it could be made phenomenal like the scale-beam. The reciprocity of influence must produce the tides coetaneously. And precisely this medium of communion in the reciprocal action of gravitation pervades the universe. It is the grand and only law, as notion in the understanding, by which we can determine the times of any phenomena of revolutions, and transits, and eclipses, and occultations, and full and change through all the heavenly bodies. What is now going on in regions of space unseen, coetaneously with the phenomena which now appear; and what events in all past history were contemporaneous in occurrence with some remarkable phenomenon in the

heavens—as an eclipse, or the full moon—and thus often the settlement of long lines of events in disputed chronology; and what phenomenal occurrences in the revolutions of the earth, the tides of the ocean, the appearances in the heavens, and even the coming and departing of comets, simultaneously with each other; all are determined on the hypothesis alone, of the fixed connections through all the phenomena of nature of a universal and everlasting communion in the reciprocities of causation, which modifies all from each and each from all simultaneously. Cut off in thought the departing comet from this reciprocal communion, and you have cut it off from all connection in the understanding; and you can no more determine its sameness of time with the phenomena of nature, than you can its directions and distances in space from the places occupied in nature. Its law of all connection is gone, and it is no longer a part of our system, nor is it any more even a determinate part of the universe. It is somewhere its own universe, in its own space and its own time; but it is not ensphered and turning in unity with universal nature in its space and its time.

It is, then, sufficiently shown in the facts, that the hypothesis of a communion in the notion of a reciprocal influence for the determination of phenomena as simultaneous in their periods in time, is no longer hypothesis but a veritable Law in the facts. And inasmuch as we have now found the law in the facts comprehensively for all determination of phenomena in place and in period, and can now see that the law in the facts is precisely the correlative of our *a priori* idea of an understanding; we may unhesitatingly affirm, that here is a true and valid psychological science. We know the Understanding completely, both in its transcendental Idea and in its empirical Law.

APPENDIX TO THE UNDERSTANDING.

AN ONTOLOGICAL DEMONSTRATION OF THE VALID BEING OF THE NOTIONAL.

THE doctrine of immediate perception of objects was with Reid in this form, that an impression on the organ mysteriously induced a state of mind that was a conception of the thing itself, and accompanied with the necessary belief that the object had a real outer existence. With Brown, the state of mind in an organic sensation came immediately within consciousness, and this was known directly, but the external cause was known only as correlative to the organic impression. Sir William Hamilton makes perception to be the product of a "presentative faculty" and to be directly and immediately cognizant of objects, but in this peculiar manner. Causation is always duplex, involving action and reaction. The object and the organ are thus necessarily present and in contact in all cases of organic impression. The whole exterior of the nervous system is open to touch, and this nervous organization is compound of body and mind, and is one of the elements in the cause of perception and the outer matter in contact with it is the other element. All perception is thus at last resolved into touch. At the point of contact the mind and its object are together, and the intellect immediately appre-

hends the outness and the extension of the object, and by muscular pressure immediately knows the hardness or roughness of the object. But the human mind can know nothing that does not thus make itself present to it in nervous contact. The theory can never explain vision or hearing to be immediately cognizant of outer objects, even if it were allowed to be true for touch, for only rays of light come in contact with the optic nerves, and only waves of air with the auditory nerves, and all we could thus know would be the color of the light and the sound of the air, not at all the extension or other qualities of the outer and distant object. And even for touch, it must assume that mind itself becomes extension in the extended nervous organism, for it knows the extension of the object only from knowing its own extension in the extended nervous system. Mind and nerve must be one, or else the unextended mind could not know the extended nervous body, and thereby know the extended outer object.

But Hamilton is himself a thorough Kantian in reference to time and space. He holds space to be "a mere subjective state," and wholly "an *a priori* form of the Imagination." Could, then, the mind immediately know the object as extended, this extension could only be in subjective space, and it would be utterly impossible to determine the objects of different persons to any one common space for all. It would leave out all data for any possibility of proving valid being to the subjective world of mind and the objective world of matter. Our Faith might be assumed to pass on beyond subjective knowledge, and admit of objective being in one common space and common time for all, but our Philosophy can never attain such a station. And our

faith can only be resolved into a divine constitution; so God has made us *to believe*, but it can not be said that so God has made mind and matter *to be*.

McCosh clearly sees that Hamilton has really yielded up all knowledge of an outer world and played entirely into the hands of the skeptic, and goes back to the assumption without explanation that we immediately perceive things themselves, and that all qualities, hot and cold, good smells and bad smells, etc., are already in the things themselves and not the affections which the things produce in us.

By none of these views of perception, and of knowledge only through perception and in consciousness, is it possible to deliver ourselves from the skeptic who presses his doubts of the validity of immediate perception for things in themselves, or if things themselves are assumed to be given by perception to the consciousness, who presses his doubts of the validity of any such assumed consciousness. The perception and the consciousness are in these cases the ultimate, and there is no possible way for philosophically determining anything about perception and consciousness themselves. For suppose we push this skeptic fully out to the extreme consequence of denying validity to consciousness, not from any arbitrary questioning, but from logical deductions or direct opposing reasons, and force him to admit, as certainly we may, notwithstanding all his reasons, that his conscious experience of the fact of his doubting is itself no more valid than the other facts in experience which he assumes to doubt, and thereby oblige him to admit that he must doubt the fact of his doubting, and is wholly skeptical in reference to the fact of his own skepticism, what then; have we thus demonstrated to him that he does know?

Have we not rather pushed him further back into the darkness of a deeper doubt, and made his skepticism all the more incorrigible? He is forced to admit that he doubts whether his own skepticism has any reality, and that nothing can be known, not even the fact that he doubts every thing. But is here such a *reductio ad absurdum* as must legitimate an opposite conclusion? Can this prove that he does know? or is there here any subversion of the ground of his skepticism? Certainly, such crowding him with his own admissions is only pushing him further from all hope of coming to the light, or that to him any light can be. If you can not meet his skepticism in its reasons, you only make him a more confirmed and incorrigible skeptic by driving him out to the extremes of his own logic.

We have now a position where we can fairly and fully meet and annul all skepticism of the valid being of mind and of matter in its very sources, and annihilate the false data from whence it assumes to question perception and consciousness. Materialism, Idealism in its double form, and universal Pyrrhonism may now clearly, fairly, intelligibly, be met and conquered. We shall find Materialism and Idealism to be simply defective, true so far as they go but false because they are each only half-truths, and that universal Pyrrhonism is wholly error, and founded on a sophistical illusion. The materialist knows matter but doubts of the being of mind; the idealist admits mind to be but doubts the being of the material; and the Pyrrhonist doubts all, for he deems man's original and fundamental faculties for knowing to be self-contradictory. It is competent now to demonstrate Idealism against Materialism, and Materialism against Idealism, and thus prove a dualism of

both mind and matter, and also competent to expose and remove the sophism on which a necessary and universal skepticism has been maintained.

1. *The Demonstration of Idealism against Materialism.*
The scholastic dictum *nihil est in intellectu, quod non prius fuit in sensu*, is the starting-point to the logical skepticism which doubts the knowledge of all but material being. The logical process may be from the origin to the completed perception, or from the full perception back to the origin. In the *first* logical form it goes thus—all knowledge must be through the organic sensation and the relative modifications which may be by reflection given to the objects of sense. But all the sensation must be induced by something that impresses and thus affects the organic sensibility; and as this impression is from matter without and made upon a material organism, it is not possible to trace the material action beyond the material affection. In the *second* logical process it goes thus—inasmuch as whatever is in the intellect has first been in the sense, and the organic sense can be impressed and affected only by matter, therefore all that is known may be referred back to some material impression upon a material organ. Any knowing of an object which is not from and of the material world must, therefore, be taken as a delusion, and the object a mere chimera.

But now, instead of the outer material impressing the organic material, and inducing a sensation in the organ as first and only condition for knowing, we have found that an intellectual agency may, solely from an anticipation of content in the sense, determine all that is possible to be given in the sense; and also, that from the very conception of a force in space, the intellect may itself determine all that sub-

stances and causes can connect in a judgment of the understanding ; and that both in the sense we perceive, and in the understanding we judge, only precisely according to these determining conditions. Hence it demonstratively follows, that the material is not conditional for all knowing, but that the intellect from its own anticipation of sensible content, and its own conception of notional substance and cause, and with no content in an organism from without, can proceed at once to the knowledge of what it is possible for a sense and an understanding to accomplish. There is an actual knowing that is wholly independent of all organic affection and sensation. And further, even when the organism is affected, nothing can be either distinctly or definitely perceived, except as the intellectual agency intervenes and works the content given into a completed phenomenon. And thus, when the phenomenal is given, no ordered experience can occur in the consciousness, except as the intellectual agency connects the phenomena in their substances, causes, and reciprocal influences.

And yet further, as proof that the intellectual is not only independent of the material, but is itself permanent and abiding through all its changing exercises, and is ever one and the same mind, we have the conviction in clear consciousness that all our appearances are in one and the same light of consciousness not only, but that all the consciousness of objects must be in one self, or there could, in the nature of the case, be no perpetuation and connection in one order of experience.

And as more manifestly conclusive still, we have the undoubted fact that all men have the consciousness of a per-
during time through all the vicissitudes of their experience,

and yet no matter how permanent the nature of things might be which occasioned such experience, it never still could occur in one subjective time to us, were it not that the one unvaried subjective agency constructed the phenomena and connected them in an unbroken series so far as the consciousness extends.

All this demonstrates a unity and permanence of the Intellect that can consist with nothing but the valid being of the one individual Mind.

2. *The Demonstration of Materialism against Idealism.*—The form of Idealism which is given in the Berkleian Sensationalism has already been disposed of, in the valid being of the phenomenal appended to the Sense. The phenomena having been proved real, their connection in an ordered experience will depend upon the same permanent substance and cause, as a notional, which we shall apply to the form of transcendental Idealism, and will need no other and separate consideration. The German form of Idealism as transcendental, or the ultimate result of the critical philosophy, is as follows. Assuming the very opposite dictum fundamental for Materialism, Idealism affirms that all sensation is from the intellect. The intellectual agency produces all that is phenomenal, and connects all in unity by a determined process of dialectical development. Beginning in pure thought as it goes on spontaneously under the control of an absolute law, the speculation puts itself within and as identical with the movement, and follows out, without forecasting, the entire subjective process. The pure spontaneous thinking is at first self-absorbed and single in the logical movement, and thus all self-consciousness is impossible. As the process goes on, and the products of the thinking be-

come set and stated in particular stages of the development, they stand out in an orderly and determined connection each with each, and make in themselves a natural series. These become conditions and limitations in the spontaneity of thought, and forbid that thought should further go on in self-absorption and unconscious development. The products become distinguished from the process, the connected series of thought stands out separate from the thinking, and as other than the intellectual agency they become objective to it and in the consciousness there appears a duality as the self and the not-self, and thus self-finding on one side is at the same time a finding an objective nature of things on the other side. Thought, thus, in spontaneous development originates its products which limit and condition its spontaneity, and which as thus made objective to itself become an ordered series of experience, and stand out in the consciousness as the regular ongoings of the external world of nature. (The Sense is but the Intellect giving objectivity to its own logical creations, and the world of matter is the limiting of the process of thought by its own ideals. The space and the time in which they appear are relative only to the products, and are objective in the same way as the thoughts.

Now, let it be admitted that an intellectual agency may pass on in just such an ordered development of thought, and awake in self-consciousness to find its own products standing out as other than itself, and objective to itself, and thus that these products become phenomena and have their relative places and periods, yet will it be utterly impossible, in any way, to bring them into a determined order of experience which may stand in one common space and one com-

mon time for all. So far as the whole could be apprehended in their places as contiguous place to place, or as the more remote could be reached through the contiguous places intervening, the determination of all in their places relatively to the place of the whole would be easy, and the contemplating mind would so far have them all in one space. But when there was any break in the contiguity from any lapse of the connecting intellect, it would sunder place from place, and neither distance nor direction could be determined across the chasm. The same subject of consciousness would have his own experience dissolved, and his phenomena standing together in their patches of places that could not be put into any one space which should hold them all.

And so far as these phenomena could be apprehended as continuous in their periods, or as the earlier could be reached by consciously remembered successions, then their periods relatively to each other in the time of the whole might be easily determined. But when there was any cessation in the connecting process there would come a void in the linked successions, and the same subject of consciousness would have his continuance of time dissolved with no possibility of renewing the connection. The same subject could not keep up a perpetuated experience in any one space or any one time.

But further, admit an uninterrupted experience, and thus a perpetuation of contiguous places and continuous periods, and therefore to the subject the capability to determine all his experience to one space and one time, he would still be unable to put his experience into any one common space and one common time with others. *His* phenomena, places, and periods, and thus his whole experience, space, and time,

are wholly restricted to himself in his own subject, and what this may be relatively to others, he can not determine for them, nor they for him. Each one is shut in upon himself, and his process of thinking and connecting in self-consciousness is isolate, and no one can determinately put his experience into another's places and periods, and make it to have its connections in one common space and one common time with others.

But we have now made it manifest, that all experiences are determined in the same one space and one time for all the human family, through the medium of a notional in the understanding. At whatever place or period any one member of the human family has lived, and had his experience of the phenomena and their vicissitudes in the world of nature about him, he knows how to connect them in the same one space and the same one time with all the experiences of the race, and that such places and periods for individual experience have their relationship in this one space and one time to the places and periods for the experiences of all others. This demonstrates that the experience of the race is not ideal and merely an objectifying of their own thoughts. The proof is conclusive that there is a substantial nature of things, and a perpetual causal efficiency working on in the material world.

Also, from the now determined law of phenomenal connections in the notions of substances, causes, and reciprocal influences, it is competent to show that a credulous or superstitious fancy, by false judgments, may introduce the following forms of preternatural visions, but which will exhaust all the methods of dealing in "lying wonders." There may be assumed to be appearances in space with no substantial

filling of space, and here we may have any form of ghosts and spiritual apparitions. Or there may be assumed to be events appearing that come and depart with no perduring source out of which they arise, and we shall have all the illusions of magic, and the legerdemain of jugglers and conjurers. Or there may be pretended to be an apprehension of future events without the causal connections, and there will be all the deceptions of fortune-tellers and soothsayers. Or finally there may be claimed to be communion with no reciprocal media, and under this we shall have all the assumptions of clairvoyance and the pretended revelations of the mesmeric sleep. These are all the forms of judgments that may be falsified in their connections, and are thus the only methods in which it can be attempted to enter into an experience neither natural nor supernatural. The necessary notional connections are here discarded, and the miraculous interventions of the supernatural are not claimed, and thus all the mystery must be assumed to lie in somewhat that is aside from nature as the preternatural. Put by themselves, all such appearances must be phantoms in a maze, and would constitute a world that could not become intelligible nor give an experience that could be determined in any one space and one time as common to all. If there were not already a substantial and causal nature of things, it could not be determined where the ghosts were nor when they appeared. A mere sense world, or a merely ideal world, could never give an experience for all in a space and time for all.

3. *An outline of the demonstration against Universal Pyrrhonism.*—This skepticism deduces its conclusions from the alleged contradiction of the consciousness by the reason. The undoubted universal conviction of consciousness is that

we perceive external objects immediately, and not some image or ideal representation of them. Reason, on the other hand, directly falsifies such convictions, and demonstrates that often at least the real outer object can not be in the sensibility, and that when it does come in contact, it can not be the object but only the sensation which may be directly perceived. In all cases, not the object, but some intermediate representative thereof, must be that which is actually perceived, and at best we must know the outer objects by this intermediate representative.

Here, then, two original and independent sources of knowledge terminate in direct and unavoidable contradiction. Clear consciousness may not be questioned, nor its convictions resisted. A clear deduction of reason may not be gainsayed, but its demonstration must compel assent. One may not be permitted to correct the other, for they are both original and independent; nor can one expound the other, for there can be no exposition authoritative of one over the other. When one source of knowledge comes in different ways to opposite convictions, an exposition may be made by an independent examination of the media of knowledge. When I perceive the same phenomenon through different colored glasses, or as passing from a rarer to a denser medium, such explanation of the contradiction is practicable between the two perceptions, but here the contradiction is affirmed to lie between clear consciousness and legitimate reasoning; and all that can be said is that they subvert each the other, and all ground of confidence in our whole intelligent being falls hopelessly away forever.

But, now, in our psychological examination of perception and judgment, we have attained the complete Idea of

the whole process, and we have also found the actual Law in the facts, and here we have found exact harmony and not contradiction. The Idea in the reason, and the Law in the facts as given in consciousness, are in the accordance of perfect correlates; there must then be some false element somewhere in this alleged conclusion of inevitable contradictions. We may also affirm further, that the data are given by which we may detect the fallacy on which rests this whole superstructure of absolute doubt, and show just how and where the fallacy is made an occasion for surreptitiously bringing in so fatal a skepticism.

The data attained in Rational Psychology may be used as follows: The content which is given in sensation becomes an occasion for a spontaneous intellectual operation of Distinction, and thereby the quality is brought into distinct consciousness. The constructing intellectual agency gives to it definite form in the consciousness, and thereby the perception is perfected and the phenomenon complete. The content as sensation, while it occasions the intellectual agency in discriminating and constructing, determines it also according to its own conditions, and is thus *objective* in its reality, as opposed to the intellectual agency which is *subjective* in its reality. All this is brought within the immediate consciousness, and is thus a direct and immediate perception. So far, our psychological conclusions confirm the *first* fact assumed by the skeptic as his preparation of the ground for his deduction of universal Pyrrhonism; viz., that the universal conviction of consciousness is that we perceive the object immediately.

But the fact further is, that this distinct and definite quality is all that the sense can reach, and all that conscious-

ness can testify to as immediate in its own light. That causality, whatever it may be, which gave this content to the sensibility and thus in its affection induced sensation, is not itself given in the sensation, nor can it be known as immediately in the consciousness. It is not at all perceived, but must be attained, if known at all, through some other faculty than that of the sense. The qualities of the rose—color, fragrance, smoothness, weight, taste, etc., as given in any and all organs of sense—are immediately perceived; but what perception ever attained the rose itself, as other than its qualities? The rose, as causality for affecting the sensibility through the content given, is not an object for the consciousness at all, and is not, therefore, in the testimony of any consciousness, immediately perceived. Reason only affirms that this causality, which is back of its perceived qualities, is not perceived; and certainly no consciousness contradicts this. Consciousness confirms this, so far as it may, by its negation of all testimony about it. It denies that any thing back of the qualities ever becomes an object to it. And the same might also be shown of the inner phenomena. The acts, as affecting the internal state in any mental exercise, come in to immediate perception, as they come immediately within the light of consciousness; but whose consciousness ever testified that his own mind, as causality for these acts, had ever been immediately perceived? Consciousness affirms one thing, an immediate perception of qualities; and reason does not at all contradict this, but affirms and *a priori* demonstrates it. Reason also affirms one thing—whatever it may be which is under or back of the qualities, and is causality for their coming within the sensibility that they may thus be brought by the intel-

lectual agency into the light of consciousness—that this causality as thing in itself can not be immediately perceived; and consciousness does by no means affirm in contradiction, but, as far as it may, sustains reason by a negation of all testimony about it. The whole basis of the skepticism, so broad and startling in its consequences, is thus found to be the old sophism *figuræ dictionis*, so often deluding us by its fallacies, and which is at once demolished when our analysis enables us to see the false play upon the phraseology. The *object for the sense* in its perception is phenomenon as quality solely; the *object for the reason* is the thing itself as causality for its qualities: and certainly consciousness may very well testify for its immediate perception of the former, and reason very well deny an immediate perception of the latter, without any contradiction between them. We are thus able to utterly overthrow universal skepticism, by being made competent, through the conclusions of Rational Psychology, to expose the sophism on which it had been built.

We have thus a valid being of the inner spiritual Intellect against Materialism; and a valid being of the external material World against Idealism; and a complete subversion of that Universal Skepticism which denied that we might know either of them.

We may also very well show how impossible it must be to attain to any such demonstration, or effect any such overthrow of all skepticism relative to our knowledge in perception, by taking the position of Reid. This is available only as a defense, not at all as a point of aggression against any skepticism; and it defends itself only in the dogmatism of an assumption. The argument from common sense was simply the conviction of consciousness which Hume alleged

was contradicted by reason. While Reid affirmed that common sense was wiser and safer than all the conclusions of reason, Hume could still allege his proofs that reason flatly contradicted common sense notwithstanding. Hume could not thus be cured of his universal skepticism, nor so far as his philosophy could avail could Reid prevent himself from being dragged down into the same abyss, and only saved himself by prudently holding on to consciousness or common sense, and let philosophical reasoning go where it would. And the same also is true in relation to the other forms of skepticism; it is not possible from mere counter-assumptions to do any thing effectual to extirpate them. "In 1812 Sir James McIntosh remarked to Dr. Brown, that Reid and Hume differed more in words than opinion." Dr. Brown replied—"Yes, Reid bawls out—'we must believe an outer world;' and then whispers, 'but we can give no reason for our belief.'" "Hume cries aloud—'We can give no REASON for such a notion;' and then whispers, 'I own we can not get rid of it.'"—*Progress of Ethical Philosophy*, p. 239.

The conclusion from all the above is unavoidable, that no subjective action of a veritable understanding can possibly give the conditions for determining a nature of things objectively to its places in space and its periods in time. Even if an understanding could create its own world of phenomenal qualities and events, it could not determine their places and periods in one immensity of space and eternity of time, if it did not also make them to inhere in their substances, depend upon their sources, adhere through their causes, and cohere by their reciprocities. And if it did this for itself, it could not determine one common space and

time for all, except as the substances and causes were objective realities. A nature of things in determined space and time must have its inherent laws of connection, and such laws can no more relax the constancy and stringency of their control, than space may break up its own immensity or time may sunder its own perpetuity. The nature of things as they exist is thus demonstrably an intelligible Universal System. Not an accumulation of atoms but a connection of things; not a sequence of appearances but a conditioned series of events; not a coincidence of facts but a universal communion of interacting forces. Nor is such a conclusion merely assumed; nor the credulity induced by habitual experience; nor the revelation of an instinctive prophecy; but it is a demonstration from an *à priori* Idea and an actual Law which logically and legitimately excludes all skepticism.

PART III.

THE REASON.

THE FUNCTION AND PROVINCE OF THE REASON.

IN the determination of the accordance of Idea and Law in both the Sense and the Understanding, we have already done what the Sense and the Understanding alone by themselves could never accomplish. The Sense by distinguishing and conjoining can give distinct and definite phenomena, but the Sense has no interest nor capacity to look *over* its own agency, or look *into* its own function, and find that which is *a priori* conditional for its own operations, and thereby explain its own perceptions. And so also the Understanding by connecting the phenomena into things and events can give an ordered experience in one common space and one common time, but the Understanding has neither interest nor capacity for rising above its connecting operations and finding that which is necessarily conditional for all processes of thinking, and thereby explaining its own judgments. The Sense is satisfied in perceiving, and the Understanding satisfied in judging, and neither of them can philosophize about perceiving and judging, and what we have already done in determining both the sense and the under-

standing has been in the use of a function quite other and higher than either.

The diverse points and instants were no sense-phenomena, and can not themselves be perceived, but were necessary conditions for all perceiving; and thus the *primitive intuition* of space and time were wholly attained by the reason. And so also the space-filling and time-abiding forces were no phenomena for the sense, nor any judgments connected by the understanding, but were necessary conditions for all connections of phenomena in judgments; and thus the *pure notion* as substance and cause has also been wholly attained by the reason. By its insight only was it made known that without the points and instants, phenomena could have neither place nor period, and without the substantial and causal forces, the phenomena could never be determined to an experience in one common space and one common time. A higher function has all along been in exercise, and we have come to an exposition philosophically of both the sense and the understanding by the insight and oversight of this superior function.

In the Sense we *perceive*; in the Understanding we *judge*; but in the Reason we *overlook* the whole process of both. The one intellect *envisages* in the sense, *substantiates* in the understanding, and *supervises* in the reason. The same intellect as sense *distinguishes* quality and *conjoins* quantity; as understanding *connects* phenomena; and as reason *comprehends* all forms of knowing.

Since, then, the sense and the understanding have had no interest in the work of comprehending their own processes and no capability for effecting it, more manifest is it, that it must now be from the interest and capacity of the

reason alone that we shall come to any comprehension of its own processes of knowing. The animal has sense and perceives, and has also understanding that judges of the relations of what is perceived, but it is only as the man is rational that he can subject both his perceiving and judging to an *a priori* determination. The animal may be said merely to know, but the man goes beyond, and knows his very processes of knowing. It becomes, thus, the last want of science in its highest exercise to thoroughly examine this function of the reason and comprehend its own processes of comprehending.

The difficulty of this last investigation appears prominently in this, that it can not be in the use of a higher function subjecting a lower to its examination, for it is the highest of all functions for knowing that we are now engaged in considering, and there can be no other method than a process of self-knowledge; the reason must examine and determine its own processes in the exercise of its own insight. Here is the grand *γνώθι σεαυτὸν* of the ancient philosophers, the most difficult attainment of all science, and comprehensive itself of all philosophy. No intuitions in space and time can here help us, for that which we seek can have no construction in figure or period; and just as little can any connections of discursive thought help us, for that which we seek can never be connected in the notions of substance and cause. That which we would here know must be wholly supersensible and supernatural. The overseer of nature can not be shut up within nature. We seek that which encompasses nature, and which can not be any media of connection within nature.

It demands careful notice how impossible it must ever

be to enter the province and fulfill the function of an all-comprehending reason by any processes of discursive thinking. It is no more preposterous to set the sense to thinking and judging, than it is to set the understanding to overseeing and comprehending. Geometry may as well be made dynamical and invade the province of natural philosophy, as to make natural philosophy transcend nature and explore the region of the supernatural. The intuitions of sense-constructions have their proper field for a pure science; the understanding-discursions have also their proper field and philosophy; and the insight of the reason must have its own field and peculiar science above them all. And yet so constant, and determined, and almost incorrigible, has been the attempt to enter the province of the reason through some processes of the discursive understanding, that it becomes an interest on the behalf of all rational science thoroughly to expose the absurdity and helplessness of all possible efforts in this direction. The prison of nature is the destined dwelling of the discursive understanding, and if the human intellect has no higher processes of knowing, then verily will these prison-doors never open on any thing beyond. All that an understanding wants, is to think the connections in a nature of things, with no hinderances, and be permitted to push her pathway from condition to conditioned interminably. But how thus make a leap from the fleeting phenomena, which perpetually alternate in births and deaths, to a world of immortality? How escape from the linked necessities in this iron chain to know the free originations of the Being who acts in His own liberty? How rise from the interminably dependent to an absolutely independent Author and Governor?

The process may begin in *subjective thought*, and the postulate may be some law of thought as a regulative-conception, or an identification of subject and object, or an abstraction which annihilates all distinctions of being and naught, but in all cases the thinking must proceed in an interminable series of fixed conditions, with no interest in nor aim toward, any ultimate consummation. It may be termed a development of the absolute thought, but in that direction the development can have no completion, and the perfected Deity is found only at the fulfillment of the interminable logical evolution; or it may essay to turn itself back upon its own footsteps and retrace its way to some unconditioned landing-stair, and at some highest generalization or abstraction assume that it has reached that supernatural, but on this assumed highest standing-point there is no relief to the demand for an *ab extra* conditioning, and the understanding must still hopelessly peer into the open void and anxiously stretch one foot forward in vacuity. The highest condition and the last conditioned are still nature only, and the living movement that has gone from one to the other can at the most be called the world-spirit, which has thought out the whole process and been the same in every stage, and not at all the world-creator, who was before the world was made and has been above it and Lord of it through all its onward changes.

Or the attempt may be made to reach the supernatural by beginning in *objective nature*. Here the understanding can move from one phenomenal event to another only through their substances and causes. The speculation must, therefore, run an endless race, for if it stop any where up or down the series, it must bring its first phenomenon from, or lose

its last in, an utter void. Should it assume to have run all back to an original absolute substance out of which all phenomena have come, this absolute substance, so called, would be only nature still, standing as the germ of the universe with its rudiments conditioned already in the order of their necessary evolution. Should it trace all to a first cause, it could find nothing in this assumed first cause but an efficiency already conditioned and which must produce the events in just such an ordered series, and could thus be merely the inner power which works out the world of nature. If it assume this cause as so producing the universe that the universe does not as much condition it in its reactions as it does the universe, then is there the sundering of the first cause from nature and a chasm is made over which it is impossible that any thought of an understanding should be able to pass. But if it allows the conditions to so go down into nature that they may be followed up from nature and reach back within the causation itself, this could be no supernatural divinity, but nature still running up her linked regressus into the bosom of the Deity. The very conception of a substance is that of a space-filling force which must affect the sense and give out its phenomena in a determined manner, and if it be modified by other substantial forces as cause, it must make its changes in a determined order. The intrinsic being of substances and causes, as used by an understanding, must make their qualities and passing events unavoidable and without alternatives. Substance and cause are essentially nature, and can never reach the being of the supernatural.

The search for the supernatural is just as endless and empty when we attempt the attainment through the indica-

tions of *adaptedness to ends*. Nature gives many indications of design, and design must have a designer. The condition must be adequate to the conditioning, and as the fact is more than causation, even *adapting* causation, so such adapting cause must have had an intelligent source. We attempt to find such intelligent source by a process of thought in the understanding. We seize upon an assumed designer as condition for the produced design, and we find this itself adapted to produce just such results. The adaptation is just as manifest here as in its own product, and is a conditioned demanding for itself a previous conditioning, and thus a higher designer, as truly and for the same reason as the former adapted product. Whence the independent unconditioned spring for all design? The fact that humanity asks this is proof that humanity has that which can not be satisfied with nature, but if the discursive understanding be set to find it, its highest adapting cause will to it be necessarily an adapted product, and from its law of thinking the chase must be still onward. We may assume that there is, somewhere, an underived designer, because the interest of this higher demand in humanity can not else be quieted, but in the use of the understanding only we are forced to rest in the mere assumption, and make the want the only ground for assuming the being, while the intellect can never attain to such being nor make its conception any thing other than an intrinsic absurdity. An endless series may be claimed as an absurdity, but on the opposite side, to the understanding there is the impossibility and absurdity of taking any adapting cause which is not in itself an index of its having already been adapted.

In subjective thought, we may thus run the race of spec-

ulative Idealism; in objective nature, we may follow the track of philosophical Materialism; and in an assumed Teleology, we may flee from absurdities up the stream of adapting causes which have no source; but the fixed connections of a discursive understanding necessarily exclude it forever from the land of promise. The Canaan of the supernatural can not so be entered. The empty abstraction is but the thinking an ideal Deity into nature; the false generalization is but the crowding of nature back into Deity. Reason presses all her interest for deliverance, but no tortured energies of an understanding can give any relief.

The conception and use of the speculative reason as given by Kant can not at all help us. It differs wholly from the reason as given by Plato, and which only is the true function we at all need for the attainment of the supernatural. The former finds in humanity this irrepressible want for an unconditioned cause and an unadapted designer, which may truly be first cause and independent intelligence, and instead of recognizing it as a demand originating in the insight of the reason and which only the functions of the reason can satisfy, he makes it to be a constitutional form or *a priori* conception in the human mind regulative of the process towards its attainment, and then pushes on the process from the conditioned to the conditioner as if at last the unconditioned supernatural might be attained. This is shown to be a vain and hopeless effort, inasmuch as it involves an intrinsic antinomy in the speculative faculty itself. The same intellectual faculty, which demands and regulates the process to get, is obliged to convict itself of an utter helplessness to attain. But it has been really the reason demanding the supernatural, and the discursive faculty

of the understanding sent on to find it. The antinomy arises from the mistake of employing the connecting understanding to work out the problems of the comprehending reason. When the reason as function is set to work in the light and under the direction of its own insight, no antinomy arises and the supernatural is fairly and intelligibly attained.

The common consciousness is the light in which we see all phenomena, and the common discursive thinking is the process by which we judge all phenomena to be connected in one nature, but a higher light and a broader process is necessary that we may comprehend nature in a clearly ascertained supernatural Author and Governor. To distinguish this insight of the reason, and express our conviction of its difference from all lower forms of knowing, we say of its objects that we have them in our "mind's eye." The painter or sculptor has his perfect archetype after which he works, and which is comprehensive of all he hopes to express on his canvas or in his block of marble, but as a creation of the reason, it is only in the "mind's eye" that the ideal stands before him. So, it has been by no perception of sense that we have determined the phenomena to one common space and one common time, or that we have found the space-filling and time-abiding force to be necessary to a common experience of nature; all this has been from the insight of the reason, and the process has been determined solely under the direction of the "mind's eye," and when we now come to the attainment of the supernatural compass for comprehending all of nature and experience, the common consciousness and the common logical discursions can do us no service, but we must direct our way by the "mind's eye" only. And yet, as the light in which we have examined

and expounded both the perceiving and judging has led us to results more convincingly valid than all perceiving and judging could themselves attain, so we may rest assured will the light of reason as convincingly bring us to the knowledge of a validly existing supernatural domain.'

A synthesis, as something added to nature which is above nature, and not an analysis, as something taken from nature which is already in nature, is what we here need. The God of nature must be known as independent of nature, and added in the judgment that He is nature's Creator. In the mind's eye, the *primitive intuition* gave occasion for *immediately beholding* how phenomena must be constructed, and the *substantial and causal forces* gave also in the mind's eye the occasion for *rationally demonstrating* how alone experience could be connected in one space and one time; so now, the mind's eye must as clearly apprehend the *supernatural spirit* in order to any demonstration, how alone universal nature can be comprehended in an author as its beginning, and a finisher as its consummating. In this only can we possess the *compass for comprehending* how nature, and nature's one space and one time, can begin and end. In this necessary process of comprehending nature by the supernatural, we shall attain the true function of the reason in its subjective Idea. We must afterwards find actual facts in colligation by a Law, which is the exact correlative of this Idea, and in this we shall have a completed science of Rational Psychology. An ontological demonstration of the being of God, of the soul, and a world of immortality, may then fairly follow.

CHAPTER I.

THE REASON IN ITS SUBJECTIVE IDEA.

SECTION I.

THE ATTAINMENT OF THE ABSOLUTE AS AN À PRIORI POSITION FOR THE REASON.

WHEN we trace backward the work of the understanding in connecting phenomena into a system of universal nature, we find every event to be conditioned to an antecedent, and inasmuch as the series in nature could be given in a discursive judgment only through the connections of the understanding, so in our regressus we can only retrace the very pathway of antecedents and consequents which the operation of the understanding has previously cast up in its connecting agency. It were in vain, therefore, to attempt any regressus in the pathway of nature's development except as we must step from the conditioned up to the condition perpetually. The function of the understanding is wholly employed in the work of concluding in discursive judgments, and in reference to phenomena it can do nothing but connect them into a nature of things through their appropriate notions, and, thus, were there no other and higher function in exercise, we should never find any higher want than that there should be given an unhindered development

to nature in the connection of cause and event, and an unobstructed passage to the march of thought down the series in an indefinite progressus or a reflex returning up the series in an unbroken regressus. The understanding finds no disquiet from its confinement within the conditions of nature, for its endowment of function capacitates it for moving only within the fixed series of nature, and it can possess no interest beyond it. Our intuitions would as soon seek to overleap and circumscribe space and time, as would our discussions to go beyond and comprehend nature.

But that there are the functions of a higher faculty in action is quite manifest, not only from our past philosophizing on the sense and the understanding, but also from the earnest inquiry spontaneously and perpetually coming up—*Whence is nature? and whither does it tend?* There are the strugglings of a faculty within whose interest it is to overleap nature, and which may never be made contented by running up and down the linked series in the conditions of nature. Discursive thinking up to the highest generalization and down to the lowest analysis can not satisfy. No possible conclusion in a discursive judgment, whether in the abstract or the concrete, can fill this craving capacity. There is demanded for it a position out of and above the flowing stream of conditioned changes, whence may be seen the unconditioned source in which they have all originated, and the strong and steady hand that holds all suspended from it self and gives to them their direction toward some ultimate consummation. But this interest of the higher faculty always exceeds the capabilities of the lower to satisfy. The sense, in its pure operations, can only construct for itself a pathway by conjoining the diversity in space and time, and

can, therefore, never issue out beyond the line which she carries onward herself and which is limited in her own movement. The understanding can have foothold only as it may step from the conception of some phenomenon as event to an antecedent phenomenon in connection by its cause; and it may, therefore, never put down the foot beyond the conception of that which is an attained condition for its present standing, and which could be no safe stepping-stone were it not itself conceived to be linked to a still higher condition. The aspirings of this higher faculty and the efforts of the inferior to reach and satisfy it, throw the human mind upon a tread-mill which forces it to a perpetual but vain toil, compelling to a continual stepping while each stair must ever slide away beneath and disappoint the hope of any permanent landing-place. We can, in this way, find no link in the series which will permit that it should be taken in the judgment as the origin of all others, and itself unoriginated from a higher; and if we assume that there must be such somewhere at the head of the series, this is merely because the higher faculty demands some ultimate point upon which all are dependent, but which is only assumed to be and never reached, because the lower faculty can never attain unto it.

An interminable dialectic is thus opened from the very faculties of the human mind, and all attempt to stop the demand in the interest of the reason, that we should somehow issue out of nature and find its Author and Governor, is in vain; and all effort in any possible use of the functions of an understanding to meet this demand is equally in vain. The reason is too enterprising, to submit to any circumscription within nature; the understanding is too limited in its

capacity, to be able that it should ever unbar the gate and point the way to the supernatural. The discursive faculty must ever keep within the conditions of the space and time-determinations, and must, therefore, ever pass through the connective notions of substance cause and reciprocal influence in concluding in judgments; and that which may not be brought within the conditions of such connectives must forever, to it, be not merely the unattainable but the utterly unintelligible. We are thus forced to dispense in this part of our work with all use of the understanding, and can see that if the supernatural may in any manner be attained, it must be in the use of the reason only. The faculty in whose interest the want originates, must rely upon its own resources alone to attain to that which may satisfy it. It is its own operation for *comprehending* universal nature that we wish to attain in a complete and systematic process, and thus possess the entire faculty of the reason in its idea. In this we shall find how it is possible that a nature of things may be comprehended; and according to which, if in fact this ever is done, nature necessarily must be comprehended. The finding of such a *fact* must belong to the second chapter of the Reason, while here we are intent only on attaining *the systematic process* as idea. As preliminary to all progress in this work, it is first of all necessary that we attain our *a priori* position of overlooking this whole province, and in the light of which our whole investigation must be conducted.

We make abstraction, then, utterly of all that is phenomenal, and therefore dispense with the use of all the functions of the sense both in the sensibility and in the constructing agency. By thus making abstraction of all that

is phenomenal, we dispense also with all the operation of the understanding, which must go from phenomenon to phenomenon through the connecting notion. The phenomenal is gone and there is nothing to connect, and the notional as a connective only remains, and the functions of the understanding have not the necessary conditions for their operation. They can connect in judgments only according to the sense, when that may give its phenomena; but here nothing of the sense remains. We have then the notional only, as the reason had supplied it for the use of the understanding in the connecting of the phenomena in the sense. We thus have nature in its substances, causes, and reciprocal influences, as things in themselves, and as they must be determined to exist by any intelligences who should know things directly in their essence, without any organs of sensibility to give to them a mode of appearance as phenomena. Having thus wholly done away with the phenomenal and the coming and departing of appearances ever varying, and retaining only the notional which is permanent, we do away with all significancy and use of the separate places in space and the separate periods in time which the definite phenomena severally occupied. Substance in its causality is, but no inhering, adhering, or cohering qualities are. The true ground and essential being of nature is conceived, but not the mode of its appearance as phenomenal world in the sense.

We have already made ourselves somewhat conversant with this pure understanding-conception of space-filling and time-enduring substance, which the reason supplies for the understanding in order that it may determine phenomena in the one common space and one common time. We would

now take it more immediately within the mind's eye, and endeavor to attain a clear reason-conception of what it must be. We have simply considered it as *force*, which in its very conception involves an antagonism, but have not attempted to attain any conception of distinguishable forces, and thus of distinct substances in their causality. Nor need we now go into any very extended disquisition on these topics, a very few considerations being sufficient for all present purposes, while a more complete examination will be found in the Rational Cosmology.

We here need only to notice that different substances are forces differently modified. The living animal has a sensory which in its excitability to appetite is force for locomotion; the living plant has no sentient nature to be awakened in an appetite, and has no locomotive force, yet still an appetency to take in and incorporate with itself that nourishment which lies contiguous to its own organization, and thus a force of assimilation for its own development; the mineral gathers about a nucleus by super-position that which is homogeneous to itself, and thus a force of crystallization; many earths have their chemical affinities, and thus a force of cohesion; and fluids and gases their affinities which give a force of combination; magnetism, electricity, and galvanism have their transmissions of influence through counter-currents and thus a bi-polar force, and gravity has everywhere an antagonism in its attraction and repulsion; while light and heat are diremptive forces that push from a center and are necessarily imponderable. And here, let it be noted, that the higher force is always superinduced upon the lower forces and adapts itself to them, perhaps modifying but not destroying them. The higher holds all the lower in com-

bination and subserviency to its own ends, but can neither exclude nor annihilate them. The force of animal life holds also that of assimilation in vegetable life; and vegetable life has the forces of crystallization, chemical cohesion, the bi-polar forces, and gravitation, all retained in subservient combination; and so the crystal has its chemical bi-polar and gravitating forces, while the crystallizing force overrules all the others and holds them subordinate to its own end. We shall not here attempt to trace the *à priori* law through all these distinguishable forces. Past a doubt such a law exists, and determines how each distinguishable substance *must be*; and determining how the substance in its causality must be will determine also how its modes of phenomenal manifestation in the sense must be, and thus what qualities and events must appear. But we are not here at all concerned with the tracing of nature in its substance downward, as it must develop itself in an experience in the sense; and only concerned in retracing its conception upward to a supernatural Author.

We will then, having made abstraction of the phenomenal, now make an abstraction of all the superimposed distinguishable forces, and retain only the most simple and that which is primary and present in all, viz., *the force of gravity*. In this we retain all that is essential to a space-filling and time-enduring force, and thus all that is essential in the notion of substance with its causality. Let there be the reason-conception of an everywhere antagonistic force, and we shall in this have substance with its causal laws of attraction, repulsion, inertia, impenetrability, motion by impulse, etc.; and thus, as it were, the frame-work or elementary rudiments of a nature of things, without regarding

whatever other distinguishable forces and thus different substances and causes may be superinduced upon this. Whatever may be thus superinduced, we may know that it can not exclude or extinguish this force of gravity. This must surely be as extensive as nature; for it is the primal force upon which all other superinduced forces must rest, and by which they must all be conditioned. We have in this all that is necessary for an *a priori* representation of a universal nature of things *in itself*, and not in phenomenal appearance.

We may, then, take any point in this primary space-filling force, and if it is not itself a center, it will be tending to some center of gravity. When we approach that center of gravity, if it is not itself an ultimate central point, that point with all the sphere which turns upon it will be tending to some further point, and thus we might move onward through worlds and systems indefinitely. Can the reason take its stand upon some central point, toward which the universe of matter shall gravitate, and find an author and primal originating source for it, without needing any higher point of antagonism? Such ultimate point we now assume in conception, and the task of the reason is, to show how it is possible that that point, and thus all the universal sphere that tends toward it, may be originated and sustained. In the comprehension of that one central point of all antagonism we comprehend the universe of nature. And, here, to prepare the way for attaining that pure ideal which must be the compass for reason's comprehension of nature, it is quite important that we attain to a clear reason-conception of this *central force* upon which universal nature must repose.

Conceive of two congealed pencils, such that when their points are pressed together the pressure shall equally liquefy both, and then will the liquefaction accumulate itself about the point of contact, and if no disturbing force intervene the fluid will perfectly ensphere itself about that point, enlarging as the pressure continues, and the liquefaction accumulates. The rigid pencils would equilibrate the pressure by an opposite unyielding resistance, and though there would be force at the point of contact, it would all be retained in that point, and there could be no accumulation. The liquefaction at the point permits a perpetual coming in and going off from the point, and in the continued pressure a continual coming in and going off, and thus a continual accumulation. This must ensphere itself about the point, for the protrusion from the point must constantly be equalizing itself in all directions, as the antagonisms push each liquefied pencil back from the point of contact and out upon itself. If now we will abstract the phenomenal, and only retain in the mind's eye that which is the space-filling thing in itself, we shall have the pure notion of force as a space-filling substance. The substantial being is the force, and the phenomenal is the mode in which this space-filling force gives its appearance through the sense. In our supposition above, for illustration, we have assumed pencils as sense-phenomena, but that purpose being answered, we would now retain the pencil-points in contact only in the mind's eye, as two pure activities in counter-action, and themselves doing what the liquid pencils indicated that the pressure was doing with the fluid, viz., ensphering itself about the point of counter-agency. We would make the mind's eye

follow the force, and not now use the bodily eye that followed the phenomenon which the force determined.

The antagonist activities in the point of contact must have each a perpetually augmenting energy springing from its own source, and this will secure that each must press the other out and back upon itself as the augmenting energy comes in, and thus determine a perpetual generation of force at the point, and distribution of it equally all around the primal central position. Each antagonism as crowded back becomes an energy still pushing toward the center, and this equalizes itself all around the center, and all points out of the center perpetually react upon the center as the generating forces accumulate about it, and thus this central force must have more reaction upon it as the sphere enlarges, and when the sphere has so enlarged as in its reactions upon the center to equilibrate the generating force at the center, the generation of forces can proceed no further, and the sphere ceases to grow. An infinite agency at the center can augment the sphere indefinitely, at pleasure. So a primal space-filling force as a veritable substance may be. Other distinguishable forces may be superinduced upon this, and we may have cohesive, crystalline, vegetable, and animal bodies as distinctive substances, but whether filling a few feet of space, or the place of revolving worlds and systems, they will all alike gravitate toward, and be controlled by this central power.

With a clear conception of such force and this kept before the mind's eye, as truly space-filling substance, we can readily determine *a priori* many things which material substance must phenomenally manifest through the sense, and follow out the physical causation which will in these forces

be everywhere working through universal nature. The material universe must be spherical; must have its peripheral limit; must have its poles in the line of the antagonism working at the center; must have repulsion from the center as the cube of the radius of the sphere, and must have reaction toward the center in each radius, and which will be attraction at the center, as the square of the radius; and as both the attraction and repulsion regularly diminish from the center, they must both be as the quantity of outgoing and reacting forces, and ever in the ratio, the repulsion as spherically self-balanced, inversely as the cube of the distance, and the attraction as circularly self-balanced, inversely as the square of the distance; with many other cosmical principles that in Rational Cosmology has already been determined and correctly stated. But it is the interest of reason here, to follow out this inherent cognition of substance and cause in the opposite direction; not to trace the forces as they work down into nature, and work out an intelligible and orderly cosmos, but as they may lead upward to the cognition of the supernatural. The antagonist agencies generate force and are determining conditions for all the development of nature downward, but in their single and separate energizing they have neither substance nor phenomenon above. The central force can sustain and give control to the universe and become to all the physical causes and changes of the universe that which can be traced to no higher physical condition. All force and change originate and propagate themselves from hence, and there is no higher point of force, or possibility of phenomenal manifestations. The single energies are not physical force, and can impress themselves upon no material organs, that they may give

content for any phenomena. They belong wholly to the spiritual and not to the material world.

But it is a fair and for the reason a necessary inquiry, whence these energies that constitute in their antagonism the space-filling forces? In what source may we find these acts which counteract to become indetified? All force, and thus all of material nature is a compound and has at least a *duality*; in what may we find a primordial and indivisible *unity*? Nature fills place in its own space and period in its own time, and space and time as common for all can only be determined in the one common nature; where shall we find the grand source and terminus out of which, and into which, both nature and nature's space and time may come and depart together? How shall we find and know Him to whom the conditions of nature, and of nature's space and time are utterly impertinent and unmeaning? All these and more such queries the reason must ever be propounding, and when nature lies before us only in the vague apprehension commonly taken of material substance and physical cause, it were vain and presumptuous to attempt any answer. There is nothing that gives traces of wisdom and rational principle in the dry and dead matter, and thus no foot-prints of the Maker to lead us out to His dwelling-place, nor any marks to tell us how He made the world or indicate how He manages its movements. But with our clear conception of forces as substantial and dynamical, nature has already in her intrinsic being the lines that lead downward in cosmical order and beauty not only, but also lines which lead upward to a wholly supernatural Creator and Governor. The tracing of such lines upward may be as reverent as the tracing of them downward may be patient

and careful, and the results may be as sure for the supernatural as for the natural. Nature exists in substantial, impenetrable, space-filling forces, and reposes on the grand central counteragency; whence comes this central counterworking of simple spiritual activities? If they work on abidingly, the universe is steadfast; if they cease their energizing, the universe at once collapses. Withdraw the central activities, and nature is at once extinguished; who originates and perpetuates this central working?

In some way the reason must come to the cognition of a source in its simplicity, that may at pleasure energize in the single acts that counterwork and constitute the central force, and which through this central force may generate and distribute the substantial forces which constitute the material universe. In this source must be a directing intelligence that conditions all things, and which conditioning must originate here with no higher author. Substance in its efficient causality is ground and source for all phenomena, but this intelligent agent must in His own simplicity be the Creator of the force that constitutes universal nature, and must put it out in the void which from its presence only is a void no longer. The Creator must stand absolved from all conditions that can arise *ab extra* to Himself, even from any internal antagonism and force which, as action and reaction, would demand that He be a composite being. His only conditions must be such as are self-imposed in the dignity of His own transcendental unity. It is not, thus, an unconditioned which is given in abstraction—merely cutting off all occasion for changes and successions above, and assuming a source and cause for all below—this the space-filling force and substance of nature itself is. It must be a positive and

intelligently affirmed unconditioned, whose only end of action is found by Himself in His own being. Such alone can stand above nature, and condition nature, without the reciprocity of a conditioning back upon Himself from nature. As thus positively unconditioned, we give to this conception of a supernatural being the high name, which must be His own prerogative and incommunicable possession—THE ABSOLUTE. Not absolved from the claims of His own excellency and dignity, for such absolute could be no personal God, but wholly absolved from all *ab extra* relations and conditions. He is a law to Himself and thus His action always self-determined, but nothing out of Himself imposes any law upon Him. The absolute in the meaning of infinite space, or unconditioned cause would be no help in comprehending the universe; our only compass must be the Being who self-controlled, stands absolved from all other controlling.

The whole problem of the reason, therefore, is seen to be in this determination of the absolute. Nature can be comprehended by the reason in no other possible manner than as encompassed in the being of such an absolute; and the determination of this, is the determination of the possibility of an operation of comprehension. In the pure ideal of the absolute we are to find our *a priori* position for overlooking nature, and thereby determining how its comprehension is possible; and in this we shall have the entire function of a comprehending faculty, higher than that of the sense which only conjoins, and higher also than the understanding which only connects, even the faculty of the reason which comprehends all that may be conjoined or connected. Such will be the function of the Reason in its Idea.

It is quite important here to carry along with us, in this part of our work, the abiding conviction that we have passed completely out of the domain of the sense and of that of the understanding also. It will be wholly perposterous—when we have made abstraction of all that is phenomenal, and transcended all that the operations of conjunction and of connection have produced, and have taken upon us the task of an *a priori* examination of the comprehending faculty—if we shall any where unawares permit that there be a sliding away from this pure province of the supernatural, and we be found dealing again with the conceptions which are conditioned to nature and the modes of space and time. The absolute is not nature and possesses nothing in common with nature, and may neither be constructed in place and period nor connected in substance cause and reciprocal influence. The entire phenomenal and notional of nature is so wholly out of and beneath the absolute, that although originating in and depending upon the absolute, yet may it never be conceived as reacting and thereby throwing back any conditions upon the absolute. We may have nothing to do with any conditions here reaching back from nature, and putting us again to our old work of discursive connections.

SECTION II.

THE DETERMINATION OF PERSONALITY TO THE ABSOLUTE.

THE reason-conception of the absolute, which the reason gives to itself, is above the notional; as the understanding-conception of the notion, which the reason gave to the

understanding, is above the phenomenal. To distinguish this pure reason-conception from the pure understanding-conception of the Notion, we here give to it a distinctive name and call it the *Ideal*. This ideal of the absolute is to be the compass for comprehending nature, as the notional was the medium for connecting phenomena in a nature of things. In this we are to determine how it may be known, as a synthetical proposition, that nature must have its author ; as in that it was determined how it might be demonstrated, that phenomena must be inherent in substance, adherent in cause, and coherent in reciprocal influence. The phenomena were in distinct and definite places and periods, and could not be determined in one whole of space and of time, except through the media of such notions as gave universality to all places in one whole of space and all periods in one whole of time. In this manner the phenomena in the sense and the things and events in the understanding came very well to be united, and the passage from the sense to the understanding was effected, and the synthetical propositions—all qualities must have substance ; all events must have cause ; all concomitant events must have reciprocity of influence—came to be readily demonstrated, when without such *à priori* demonstration they could only be used as assumptions. And now the same result of an *à priori* demonstration of a synthetical proposition is to be determined, but with this difference, the conceptions of the phenomena and the things were, the one in the sense and the other in the understanding ; while here, the conceptions of a nature of things and of an author of nature are, the one in the understanding and the other in the reason. The passage from the sense to the understanding and from the understanding

to the reason both demand a synthesis, and can neither possibly be effected by any analyses descending nor any generalizations ascending; and as we have found the passage for the first in the notional, so now we are to find the passage for the second in this pure ideal.

And yet still further, as we found the very essence of substance in its causality to be a space-filling and time-enduring *force*, and that as counter-agency it filled its place in space from a permanent center and might thus determine all places in its own space, and also as enduring center it might thus determine all periods in its own time; so now we must find the very essence of the absolute to be a spaceless and timeless *personality*, who, as above all the modes of expansion in space and duration in time, may be not nature but supernatural; not thing but person. If conditioned to the one whole of nature, of space, and of time, then it must be of the substance and causality of nature, and can never be the Divinity above nature. No matter whether all of the phenomenal be abstracted from it or not; in naked substance and cause it is but pure force, space-occupying and time-abiding, and must react upon nature and nature upon it, and the compound thus effected must still be nature altogether. And no matter whether it be carried above all phenomena; it is then pure force in its antagonism at the center, and as undeveloped must yet go out in development, and such is only nature in its rudimental germ, and not at all nature's author and God. Except as we determine the absolute to be personality wholly out of and beyond all the conditions and modes of space and time, we can by no possibility leave nature for the supernatural. The clear-sighted and honest intellect, resting in this conclusion that the conditions of

space and time can not be transcended, will be Atheistic; while the deluded intellect, which has put the false play of the discursive understanding in its abstract speculations for the decisions of an all-embracing reason, and deems itself so fortunate as to have found a deity within the modes of space and time, will be Pantheistic. The Pantheism will be ideal and transcendent, when it reaches its conclusions by a logical process in the abstract law of thought; and it will be material and empiric when it concludes from the fixed connections of cause and effect in the generalized law of nature; but in neither case is the Pantheism any other than Atheism, for the Deity, circumscribed in the conditions of space and time with nature, is but nature still, and whether in abstract thought or generalized reality, is no God. It becomes Pan-cosmism rather than Pantheism.

This determination of personality to the absolute, and which takes it out from all the modes of space and time, is the only possible way in which it may be demonstrated how nature may have an author, which author shall not be nature still and yet demanding for itself an author. In such a pure ideal as the absolute in its personality, a compass is given by which the reason may comprehend nature, and the completed process of comprehension thus effected is a faculty of the reason in idea. This, therefore, is a necessary, and our next work, to determine personality to the absolute. This will give all the necessary elements in the work of COMPREHENSION. We termed unity, plurality, and totality the primitive Elements in the operation of Conjunction; and also substance and accident in space, or, as the same thing, source and event in time, and cause and effect, and action and reaction, the primitive Elements in the operation of Connec-

tion; we will now term these when found, the primitive Elements in the operation of Comprehension.

It will result here, as in each of the former operations, that the primitive elements will be three in number; and also as in each former case, that the first and second elements will stand to each other in an antithesis, while the third will be the synthesis or point of indifference between the first two.

1. Antagonism, by which is meant the point in which two agencies meet and counter-work, determines position in space. The accumulated and ensphered force determines place in space; and, as fixed in its center, the entire sphere occupies perpetually the same place in space. From this space-filling substance in its permanence the one whole of space is determined, inasmuch as its permanent place gives a datum for determining direction and distance from its center to all the places in space which it occupies. But if we were to conceive of its extinction, though it were impossible to conceive that space itself were extinguished, yet it would be wholly impossible to determine sameness of place, and thus impossible to determine the same wholeness of all space. The conception of a new antagonism would give again new position, and the engendered force would give again new definite place, and thus a determined whole of all space; but whether this whole of all space were the same as the former whole of all space could no more be determined than whether the places in which the reflected moon and stars in two different lakes appeared were the same whole space. The first position and place, and thus wholeness of space, are lost to all determination so soon as the space-filling force is extinct, inasmuch as there is then nothing by which permanency of

position and place can be indicated. It thus follows, that the single pure agency which can have no antagonism, can have nothing to which the conditions of space have any significance. It can never be determined in position, place, nor in the sameness of any one whole space.

So also this point of meeting in action from whence counter-agency takes its rise, determines instants in time. The successive counter-working and accumulating of force and continuance of changes determines period; and, as reckoned from the primal instant onward, gives a datum for determining all period in which the series of changes occur, and thus of determining the same one whole of time. But, were we to conceive this counter-agency to be extinguished, and another antagonism with its determined instants and successive periods and one whole of time to be determined: it would be impossible to determine that the two wholes of time were the same whole of time, equally as much so and for the same reason as to determine whether the successions and times inherently in two dreams were in the same whole time. There would be no perduring source which could indicate the periods of its own changes. It thus follows, that the single pure agency which can have no antagonism can have no fixed instant, no definite period, and no determined whole of time; and thus to it none of the conditions of time can be significant.

Moreover, in this antagonism the primal condition of a nature of things is determined. Its counter-agency engenders the space-filling substance in all its causality, and evolves the successive changes as cause and effect, all of which in their conditioned connections depend upon this primal condition; and thus all of nature is determined in this

central counter-working; and if any other distinguishable forces be introduced, they must be superinduced upon this, for this primal force must condition all that shall come within it. It thus follows, that the simple pure agency can come within none of the conditions of a nature of things; inasmuch as within itself there can never be antagonism, and thus can never give an engendered force which is causality and condition for all of nature, and, therefore, to it the notions of substance, cause, and reciprocal influence are wholly impertinent and insignificant.

This reason-conception of simple, pure activity is thus wholly unconditioned to space, time, and a nature of things; and is *a priori* conditional for all transcending of nature. It were wholly impossible to find any passage out from nature to the supernatural, except in this reason-conception of a pure agency which can come within none of the conditions that belong to nature, and has none of the necessitated connections of a discursive judgment. But such pure activity is the conception of *pure spontaneity*; and this must stand as our first element of Personality.

But this reason-conception of pure spontaneity must be most carefully distinguished from what sometimes takes the name of spontaneity in the understanding, and which belongs to nature. Thus, we speak of the spontaneous productions of nature; spontaneous growth; spontaneous combustion, etc. Spontaneity here is negative only of *applied* conditions. The earth produced its fruits without the application of human toil as a condition; the combustible took fire without the application of a spark or flame as a condition. But in neither case is it a negative of all condition and thus an exclusion of necessity. There is an inhe

rent causality already in possession, and in virtue of which the product appears. The earth is already cause for the germination of the seeds in its own bosom; the combustible is cause for combustion in its own fermentation; there is no need for the application of any other causality than that already in possession. But this efficiency has been transmitted from a higher causality, and is thus truly conditioned in its antecedent. The causation has itself been caused, and could not have been a *causa causans* had it not also been already a *causa causata*. It is wholly a discursive process that we here pursue, and the efficiency must be followed up from event to event, the subsequent always conditioned by what has already taken place in the antecedent. Nature possesses only conditioned causality, and though it may negative all applied conditions and call this spontaneity, yet can it never negative all communicated or transmitted condition and be pure spontaneity.

There is also, sometimes, a passing up to the primal conditions, and by a negation of all antecedents an assuming of a spontaneous beginning in this primal condition. But such attains no positive reason-cognition of spontaneity, and only an arbitrary negation of all higher conditioning. The only method of a distinct cognition of this assumed spontaneity is, to fix the mind's eye upon a force in a point of counter-agency. This gives the genesis of a substance which fills definite place in space. The force as substance in its causality, begins to be in this antagonism; and above this it is not properly substance or cause, but pure act. Causality begins in this counter-working, and develops itself in a perpetual unfolding of new conditioned products. Here, therefore, is cause in its highest conception; unconditioned, ex-

cept in the inherent antagonism which is its own being. And now, this is sometimes taken to be the Unconditioned ; the Absolute Cause ; the Spontaneity that begets nature ; and that in which not only all philosophy of nature, but all science must terminate. It is the starting-point for thought, and nature must be evolved from it. It must go out in effects, filling space and evolving the universe from its own efficiency, and must ever work on in the interminable progressus of pushing new conditioned products from the last ; and is thereby the author of a perpetually unfolding nature of things. The author of nature can no more be without the universe, than the universe can be without its author. The universe is but the perpetual unfolding of the absolute cause.

But, in this there is no pure spontaneity. It is bound in its own conditions, and is under a necessity to develop itself. It is not nature's author as supernatural but only nature's germ including the rudiments of a universe, and is as much nature at the first as in any successive step of its development. Causality is ever counteraction ; and thus inherently conditioned action ; and is notional for the understanding, not pure ideal for the reason. It can possibly have no element of personality within it, and thus no pure spontaneity may be analyzed from it. The supernatural is not absolute cause ; this is an absurdity, inasmuch as cause is ever inherently conditioned.

The reason-cognition of a pure spontaneity must be found in the simple activity, and not in any force which is the product of counter-activities. The substance in its causality originates in, and can not itself possess, a pure spontaneity. The counter-working of causation must be tran-

scended, or we only mount to where nature begins, but we do not go over at all within the supernatural. Nature is connection through dynamical conditions; the supernatural is uncompounded, uncounteracted self-activity. That an author of nature may be person independent of nature, he must be pure activity, neither caused by, nor conditioned to, any efficiency imparted or transmitted *ab extra*. If this activity stand conditioned to any thing *ab extra*, then does nature reach beyond its author; and he is comprehended and no compass for comprehending nature. The absolute must comprehend all counter-agency, and must therefore be pure spontaneous agency; and in this is found the first essential element, which transcends the agency that is compound and conditioned as *thing*, and is agency in its own unconditioned simplicity as person. The *first* Element in determining personality to the absolute, and thus the possibility of comprehension, is *pure Spontaneity*.

2. Pure spontaneity in itself is wholly blind and lawless. It can not of itself be sufficient to determine personality to the absolute, nor give the compass for an operation of comprehension. There must be some end to which the action as spontaneity is directed, and such end must give the law to the action, and thus as antithesis to spontaneity give the cognition of spontaneity controlled and determined. But the cognition that such end is in nature, or that it is nature itself, will subject the spontaneity to nature, and at once condition the absolute in necessity. It is, only that nature may be. This controlling end must be other than nature, out of and independent of nature, or it can not possibly give us the *a priori* condition in what way nature itself must be, and thus comprehend nature in the eternal design and rea-

son of its author. As above nature, that end which is to give law to the agency creative of nature must be supernatural. It must determine how nature is to be, while yet nature is not brought into being; and must thus be controlling over the spontaneity, independent of any and all conditions to which it is to direct the spontaneous agency that it may give them their birth. The absolute itself as author of nature exists alone out of nature, and is the supernatural; and thus this end, controlling the creative agency as spontaneity, must be in the absolute itself. This must be its own end, and thus also its own law; and thereby comes out the reason-conception of personality in this, that the absolute is pure Will: he is self-active and self-directed. His end, and thus his law of action is not in nature; for that would degrade him at once to a means, and a thing to be used for a further end. He would be, only that nature as end might be. His end is in himself, and his law of action is self-imposed; and he thus makes nature to be for his own behoof. That spontaneity may become *personal* activity, and thus a will which may *behave*—*i. e.*, have possession and control of its own agency—it must possess an end in itself, and thus impose law upon itself, and thereby be autonomic. But such a conception of end and law in the absolute itself, is *pure autonomy*; and this must be a second primitive element in personality.

But this reason-cognition of *pure* autonomy is not very readily attained in its complete discrimination from all the illusions which a discursive understanding constantly obtrudes upon us. It is not by any analogies with the dynamical connections in an understanding, much less any analysis of such conclusions in judgments, or any abstractions of

conceptions gained in discursive processes of thinking, that will bring us to any right and adequate apprehension of what a pure will is, and in it the everlasting distinction in kind of all person from thing. It is not in itself probable that this knot in all dialectics and vexed problem in all ethical metaphysics—so intricate that the labor of centuries has been here exhausted—is so easily to find its solution, as by a mere change of the discursive connection from the conditioned series in *outward* nature to any conditioned successions in *inward* experience, that we are henceforth to have it free from all entanglement. If we keep the process within the discursions of the understanding, we shall have necessity and heteronomy; never spontaneity in autonomy. We may have a sensibility awakened to appetite, but no such action from awakened desire can be pure will, any more than is the flowing stream when impelled by its own gravity and retained within the banks which its own action has constituted. The present has always its condition in a higher period than its own, and when it is to go forth in action, that action has already its law imposed upon it by another above and out of itself, and it can not thus become its own end, and arrest the whole process, and throw itself out of its long and deep-worn channel, and originate some new product of its own for which it shall be beholden solely in autonomy. Its perpetual flow of activity can in no way be discriminated from physical necessity, by any arbitrary terms that may be put upon it. It is important that we here distinctly apprehend how completely we must transcend the whole province within which work the functions of the understanding, or we can never find the compass for comprehending nature. For this it is conditional that we have

a will, in which only can there be personality; and a pure will is in its very conception self-action self-directed; spontaneity in autonomy. If, in any way, we put the end which is to condition the activity out of the absolute itself, we thereby bind the absolute in conditioned nature.

This will appear in the conclusion of the following considerations. *First*, let it be considered that in nature nothing is for itself. Through all her series, nature now is, not for what it is, but for something to be. It is not itself its own end, nor possessing any thing which is its own end, but is ever an unfolding to attain something not yet consummated. No portion nor aggregate of nature can be autonomic, but is and ever must be under conditions imposed upon it, and thus is ever a means to an end not itself nor its own. It is ever more used as a thing, and can never become a user of things for its own end as person.

But, *secondly*, we will rise above the phenomenal in nature, and thus pass from the changes which give coming and departing events in a perpetual series of conditions, and take the space-filling force at the point of its antagonism on which all nature reposes; and here we may find a sort of autonomy, but not pure, or such as elevates from thing to person. This central antagonism is force; and in its counter-working supplies force which enspheres itself in space, and thus has within itself its own law, and in its working diffuses its own law through all the sphere; and thus the universe is in this view under a law self-imposed. The space-filling force diffuses its own law through all the space filled, and is ever thus working on under the conditions of its own laws self-perpetuated. This is *mechanical* autonomy. The central force develops itself, and carries its own conditions

throughout all the space of its working. But such substance in its causality becomes force in the meeting and counteracting of the two simple agencies, and has thus its law put into itself by agencies from above and out of itself, and it can only transmit this inherent but imposed law from condition to conditioned, indefinitely. It must ever work for some end not yet reached, and can not thus ever find its own origin or its consummation. It can not propose itself as its own end, and thus arrest or modify its agency for its own sake; but must evermore work on, blind to all other ends than that of filling space and evolving the conditioned from the antecedent condition, and be a thing used by others, and not person to use others or itself for its own behoof. Its inhering law is yet imposed by a higher, and for an end yet to be, and is, therefore, truly heteronomy and not pure autonomy.

And, *thirdly*, there may be conceived any other distinguishable forces superinduced upon this space-filling force, and we may have the forces of magnetism or electricity over-ruling but not extinguishing the force of gravity; or chemical or crystalline forces successively over-ruling and modifying all on which each may be superinduced; and we shall have each higher distinguishable force possessing its own inherent law, and diffusing this law through all the sphere of its operation, and thus acting for another and higher end than that which lies within any distinguishable force beneath it; but this inherent law will have been still imposed upon it by some simple agencies above it, and conditioning its action to the attainment of ends not yet reached, and thus no more an end in itself, and autonomic, than the primal antagonistic force of gravity.

And, *fourthly*, we may have the distinguishable force of vegetable life, and which may control all the forces of attraction and repulsion, and chemical affinities, and crystallization, and use them all as subservient to its own higher end in assimilation and growth; yet still will this *vegetative* autonomy be a law imposed from above itself, and necessitated to a perpetual working for an end beyond itself, and can never attain to the completed and final plant in its consummation for which all preceding generations of plants have germinated and died. The vital force works on evermore from parent plant to produced germ in the servile toil to get an end which is not its own, and under the compulsion to a task which will never be finished. Here is only a thing and not person in pure autonomy.

And this may also be extended to the superinducing of the distinguishable force of animal life in its sentient capacity, and its internal organism for receiving and masticating and digesting its food, and this including all the irritability of nerve and muscle which induces appetite, and locomotion, and selection of food, or objects of appropriate gratification for any sense; and we shall have here a *sentient* autonomy which seems to be a user of many things for its own end in its self-gratification, and which, as controlled by self-enjoyment may sometimes be called will (*brutum arbitrium*); but this entire *anima* is still nature altogether and wholly shut up within necessitated successions, and is thus utterly thing and not person. The entire animal force is conditioned in its primal constitution, and the sensory necessitated in its internal pathognomy, and must thus work on as the servant of the animal organization and made to do the work which the body wants and when it needs; and it can never finish

its toil, for it is perpetually kept in successive animal organizations from generation to generation, which never cease their craving. It can never rise to the dignity of making itself its own end and satisfying itself in its own action, but is ever lashed on by a master who imposes the task, and reaps the products, and allows that there be occasional gratifications amid the toil only as necessary to keep the slave alive and in a working condition. A sensory is a thing under necessity, not a person in autonomy.

Nor, though we add a light above its own instinctive cravings, in which the sentient force may work, shall we thus give to it personality. Make it competent to generalize its own past experience and thereby come to the conclusion that some gratifications cost too much in their subsequent exactions or inflictions, and that there is a rule of prudence which lies in this generalization of consequences to be heeded, and let this rule be very accurately attained in its own well-weighed experience; still every present result is already conditioned in some past event, and whether a specific appetite shall be strongly excited and control the action, or whether a generic desire of self-love as prompted by prudence shall carry the movement, this is already settled in some previous period which has conditioned the sentient force then to go out in operation. The end of action is out of itself, and imposing its law upon itself, and the sensory with all its prudential considerations is conditioned force and not will, and acting under a law imposed upon it, and not in autonomy.

Yea, should we conceive that there was the capacity to generalize universal experience, and find the rule of prudential welfare for all sentient beings; the force which should

go out in beneficence toward all would have been already determined in that which has conditioned its amount of sentient kindness. That it is prudent to itself, and congenial to itself, to be kind to others, is a law imposed upon it by that which out of itself has conditioned its sentient force to be such and so great as it is. Its benevolence would as completely stand conditioned in its pathology as any other constitutional appetite. It would be the product of its physiology as truly as its hunger, and as much bound in the series of conditioned changes as its digestion or its growth. It is all nature; wholly a thing and not a person.

By none of the distinguishable forces of nature, from the mere antagonism of the primal force to those of the most complicated in animal life and sentient gratification and function of judgment in generalized experience, do we find any passage to the supernatural, nor any approach to the clear discrimination of thing from person. All is wholly under law imposed, and in no case itself an end in itself. All is a means to an end; that which knows no indignity in being used for another; a thing that may have a price; and thus never rising to the dignity of personality, which has rights that it may not compromise, and can never consent that it should be bought and sold, nor that it should ever permit itself to be used by another regardless of its inherent autonomy. Just as little is there pure autonomy in nature, as there is pure spontaneity; and though one thing may override and control another thing, yet is the highest still a thing and subjected to conditions above and out of itself.

We rise then, *fifthly*, to the absolute above nature, as we must for determining pure autonomy to personality. And here an accurate and extensive discrimination is to be made,

and which can not be effected without care, or we shall possess this second element of personality but very confusedly and obscurely.

Let it be considered that in one aspect the spontaneous pure activity may be contemplated as simply *artistic*. It is to go out in the production or creation of distinguishable forces, and thus in the genesis of a nature of things. But in such going forth of the pure activity there must be some end to be attained, and some law must be given to the process by which the agency may go out the most directly and completely to its issue. This can not be in the light of any copy or pattern already objectively existing, in which may be found the model of what is yet to be, for the creator of nature has not yet an objective universe after which he may fashion another. As artist, the absolute must possess the primary copies or patterns of what it is possible may be, in his own subjective apprehension, and the first creations are subjective in the absolute reason as universal genius. The pure ideals of all possible entities lie as pure reason-cognitions in the light of the divine intelligence, and in these must be found the rules after which the creative agency must go forth. That subjective pure archetype of what is to have objective being in an actual space-filling force, is the law by which the pure spontaneity is to be controlled. The agency which has this subjective archetypal rule in its own light has artistic genius, and such directing genius may be termed wisdom. When nature is to be brought forth into space and time, the creator must possess this in the beginning of his way. Of the whole work, this artistic wisdom personified may say, "When He prepared the Heavens I was there ; when He set a compass upon the face of the

depth; when He established the clouds above; when He strengthened the fountains of the deep; when He gave to the sea His decree that the waters should not pass His commandments; when He appointed the foundations of the earth; then I was by Him as one brought up with Him, and I was daily His delight, rejoicing ever before Him." And now this artistic wisdom and rule is, in one acceptation, autonomy; it is law and guide for the creative agency, and it is a possession in the absolute itself. It is like the architect who has his own rules in his own intellectual being. He is in an important sense a self-regulated agent, working after his own subjective archetypal pattern.

But this will not suffice for the attainment of a pure autonomy. This artistic skill is something to be used, and the personality using has not yet been found. What is to determine that it shall work? and after what pattern it shall work? and whether at the expense of marring the product the workman shall not be induced to violate the artistic rule? If there be nothing but some want in a sensory to be satisfied, like a mechanic who builds his own dwelling for his own convenience, then will the end be found in the gratification of that craving; and no matter how skillful, how spacious, or how costly the building, it has all been conditioned to the want he found himself constrained to gratify, and for which the agency must go forth, or his sentient nature must abide the unhappy consequences. The value of the work and of the workman is estimated solely by the sentient gratification as end.

When material worlds in all their distinguishable forces have been put into space, and gravitating, and chemical, and crystalline agencies have been made to develop themselves

in perfect conformity to the archetypal rule ; if, then, this material creation is to be clothed in the verdant beauty and luxuriance of vegetative life, and the sentient want in the maker and his artistic pattern be given, the work will go on to this higher consummation and the gratification be therein attained. And should, again, all this beauty and bounty seem to lie waste, as the stream in a desert, until some sentient created beings be introduced to partake and enjoy, and the great Architect find within himself a want that can only be satisfied by making and seeing sentient beings happy ; then would the artistic energy again be put forth to gratify this craving desire in his own sentient being, and the air, and waters, and earth o'er all its hills and plains will teem with living happy millions. We might thus go on through indefinitely higher grades of sentient desires, and furnish our artist with higher patterns for created products, and we should keep an artistic skill perpetually energizing for the gratification of sentient wants, and which, if finally terminating in some highest wants and thus in some highest happiness, would still be all of nature. The want is found to be already determined ; a conditioned nature conditioning all the working, and all the products of the artistic workman ; and which is thus a mere automaton, not pure autonomy.

We may essay to elevate such artistic autonomy which merely governs its actions by the rules given and for the end of gratifying some sentient wants, to the place of supreme author of nature, and as if we had found in this a personal Deity may call him the divine Architect ; and his wisdom may be consummate in adapting means to ends, and manifold in working ; but the end of all is already conditioned in his

necessary sentient cravings, and as truly in nature when his own want can be satisfied only with the happiness of other sentient beings as when the animal hungers for its daily food. Whoever possesses the sensory with its craving want must seek for this artistic skill, and use the artisan only for the gratification to which he may minister ; and he may thus be *good* in the acceptation of *useful* beyond all else, inasmuch as he alone may minister to the highest want. Such an artist, to such highest sentient craving, would be invaluable ; above all price in exchange ; worth more than all else, because serving a want the highest of all ; and, brought in barter to the market, would buy out all that in the universe could be put to sale ; but still this would be only a thing among other things as goods in the market, and more valuable only as a more profitable instrument for the gratification of a higher sentient end. He is a workman who can guide his hand by his own eye, and whose skill is worth so much by the day or by the job to the employer who wants him. He is only a means to be used for an end, precisely as a master may want the higher faculties of his slave to accomplish such ends as he can never reach by the brute strength and instinct of his horse, and on this account only the slave is worth just so much more than the horse. When the absolute is thus viewed as a means to some end in sense, and out of and apart from his own intrinsic excellency as end, he is at once degraded from a sovereign to a servant ; from a person to a thing ; he exists for what he makes ; his price is fixed by his products ; and he is worth so much more than other workmen only as he can make better wares. A sentient nature, somewhere secretly wound up to an undeniable craving, is the spring which sets the automaton in

action; and he works for, and works out, the end for which he is already conditioned in his own constitution. The only autonomy that may be affirmed of such an artist is, that he carries his rules in his head, but the spring and end of his action are wholly from and in another who employs him. We have not thus attained to any Personality.

What we need is not merely a rule by which to direct *the process* in the attainment of any artistic end, but we must find the legislator who may determine *the end itself*. This question is not the ultimate—In what way shall an artist be furnished with rules for doing his work to the greatest perfection? When that is decided to be after his own pure subjective archetypes, the ultimate question is altogether this—Whence is the ultimate behest that is to determine the archetype and control the pure spontaneity in its action? Shall it go out in an antagonism as central force, in which shall be the genesis of an ensphered and revolving space-filling substance? and why thus? Shall we answer, it must be thus in order that a subsequent superinducing of distinguishable forces upon this mere space-filling substance, such as magnetic chemical and crystalline agencies, may all together work on and work out the complicated but exact machinery of a material universe through all its component systems and worlds? But why such a material universe in its perfect architecture? Shall we again answer, this is all thus in order that the beauty and bounty of a vegetative life may be spread over hill and valley?—but why this exuberance of vegetative life? In order, again shall we say, that glad sentient beings may people the material worlds, and find a home amid all these adaptations in the heavens above and the earth beneath to their animal

wants?—but again the inquiry is just as prompt and urgent—why this world of sentient beings? And should we again answer: all this is for this great end, that some sentient beings may possess the exalted faculty of generalizing their own and their fellows' experience, and determining rules of utility, and prudence, and economy, which must regulate the action of each for his own highest welfare, and the interaction of all for the highest happiness of the whole; and that thus there may be a social organization and a political sovereignty, which may administer a government of penal sanctions, coercing each to act for the highest happiness of all? But this social world, thus legislating for itself on the grand principle of its highest happiness in the aggregate, is still a created world; a product of an artist after the rule of his own subjective archetypal perfection;—why such a social world?—whence the behest that set this artist to his work, and called out this artistic wisdom in the service? And here shall we answer, as if it were to stop all further questioning, that this artist had a sensory the gratification of whose highest desire was the impartation of happiness to other sentient beings; and that thus his own inner want put him to the work of making other sentient beings, who in their own happiness might satisfy him and make him to attain his maximum of gratification? But surely in this, we have nothing but nature in its necessitated conditions. The absolute is simply kind and good-natured, and acts from constitutional cravings, as really as all other sentient natures. The susceptibility to happiness from benevolent action is in this way as truly an appetite in its awakened desire, and necessitated in all its cravings, as any animal want. Questions like these still necessarily return—Why such suscepti-

bility to beneficence?—What if the want in the sensory had been of an opposite kind? Must the artist work merely because there is an inner want to gratify, with no higher end than the gratification of the highest constitutional craving? Can we find nothing beyond a want, which shall from its own behest demand, that this and not its opposite shall be? Grant that the round worlds and all their furniture are *good*—but why good? Certainly as a means to an end. Grant that this end, the happiness of sentient beings, is *good*—but why good? Because it supplies the want of the supreme Architect. And is this the *supreme good*? Surely, if it is, we are altogether within nature's conditions, call our ultimate attainment by what name we may. We have no origin for our legislation, only as the highest architect finds such wants within himself, and the archetypal rule for gratifying his wants in the most effectual manner; and precisely as the ox goes to his fodder in the shortest way, so he goes to his work in making and peopling happy worlds in the most direct manner. Here is no will; no personality; no pure autonomy. The artist finds himself so constituted that he must work in this manner, or the craving of his own nature becomes intolerable to himself, and the gratifying of this craving is *the highest good*.

We must find that which shall itself be the reason and law for benevolence, and for the sake of which the artist shall be put to his beneficent agency above all considerations that he finds his nature craving it. It must be that for whose sake happiness, even that which as kind and benevolent craves on all sides the boon to bless others, itself should be. Not sentient nor artistic autonomy, but a pure ethic autonomy which knows that within itself there is an excellency

which obliges for the sake of itself. This is never to be found, nor anything very analogous to it, in sentient nature and a dictate from some generalized experience. It lies within the rational spirit and is law in the heart, as an inward imperative in its own right, and must there be found. The pregnant illustration of the Apostle is explicit that spirit only may know what is in spirit: "What man knoweth the things of a man save the spirit of man which is in him? even so the things of God knoweth no man but the spirit of God. The spirit searcheth all things, yea, the deep things of God." This inward witnessing capacitates for self-legislating and self-rewarding. It is inward consciousness of a worth imperative above want; an end in itself, and not means to another end; a user of things but not itself to be used by anything; and, on account of its intrinsic excellency, an authoritative determiner for its own behoof of the entire artistic agency with all its products, and thus a conscience excusing or accusing.

This inward witnessing of the absolute in his own worthiness, gives the ultimate estimate to nature, which needs and can attain to nothing higher, than that it should satisfy this worthiness as end; and thereby in all his works, he fixes, in his own light, upon the subjective archetype, and attains to the objective result, of that which is befitting his own dignity. It is, therefore, in no craving want which must be gratified, but from the interest of an inner behest, which should be executed for his own worthiness' sake, that "God has created all things, and for His pleasure they are and were created."

It is not sufficient that a product is attained which is good only as a means to some further end; nor yet that a

personality is assumed who is only artistic skill and wisdom, for this is only means to an end, and wholly a servant for another's using; nor yet that this servant have wants, even that he should make others happy for the sake of his own happiness, for this keeps him in servitude still, inasmuch as the want can only be as a means to the creation of a happy race, and the creation of such a race a means only to satisfy such a want; but above all the artistic skill and the imparted happiness, we must come into the light and purity and majesty ineffable of an uncreated personality, before whose presence all this sublimity of architecture and all this exuberance of bounty and of gladness may be laid as an offering, whose only estimate can be that it is worthy to be accepted of him, and whose only end can be that it has been created for him. The *SUMMUM BONUM* is in his dignity and excellence, and in this the great Eternal read the law how created nature should be, and under such behest the fiat went forth, and such Nature is.

It is precisely in this light, and solely in this presence, that we wake to the consciousness of what reverence is, and know that we stand before an awful Majesty where we must bow and adore. We may stand amid all the sublimities of that wonder-working *power* which is fashioning the material mechanism of the heavens and the earth, and we shall admire and praise in profound astonishment; we may look upon all the arrangements which, in the bounty of an ever-working *wisdom and kindness*, is diffusing sentient joy and gladness over millions of happy beings; and we may go with such as are competent to recognize their kind benefactor into His presence, and hear the ten thousand times ten thousand voices, in different ways proclaiming their *glad-*

some *gratitude* as the sound of many waters, and we shall sympathize in their joys and praises with a rapturous delight; but it is only when I see all these standing in the presence of that absolute sovereignty and pure moral personality, who searches them all in the light of His own *dignity*, and judges them by the claims of His own *excellency*, and estimates their worth solely in reference to His *worthiness*; and when also I see that thus it behoved they should have been made, to be fit creatures of His ordering and accepting, and that He made them thus after the behest of His own uncreated reason, and in the light of His ethical truth and righteousness, and governs them and holds them ever subordinate to His own moral glory and authority; it is in such a presence only, that I reverently cover my face, and fall prostrate, and cry from my inward spirit, "Holy, Holy, Holy, Lord God Almighty;" "Heaven and earth are full of Thy glory." "Thou art worthy O Lord, to receive glory, and honor, and power, for Thou hast created all things, and for Thy pleasure they are, and were created."

In this is the very essence of personality, that it may assume in its own right the authority to control its own agency; and may lay claim to the high prerogative of being an end, and must resist whatsoever would degrade it to be used as a means to any other than its own end. In this is Conscience; which must forbid all intrusion from any possible source within its own domain, and in violation of its own end as moral character. And in this also is Will; that the act is not nature necessitated in its conditions, nor alone pure spontaneity in its blindness, but held in control by that witness of what is due to itself as personality; and thus possessing that inward spring in the interest of its own

worthiness, which may resist, and shut out, and beat down, all that would seduce or force it from allegiance to the claims of its own dignity. Nor except in the possession of such intrinsic excellence and dignity of being, and for the behest of which every thing else must be trodden under foot, can there be an agency, however mighty, or skillful, or beneficent, that may be permitted to take rank among personalities; but at the highest must be put among utilities, which may command its own price, but can never claim a reverence for its own dignity. We thus come to the safe conclusion, that in order to personality the absolute must have, not only the element of pure spontaneity, which would give autocracy, but moreover that inward witness of its own worth and dignity which makes itself end and not means, and which gives *pure Autonomy*.

3. Pure spontaneity in the absolute is simple act, standing above all the conditions of force, and thus above all necessity as nature. But mere spontaneity is blind action, aimless and lawless, and though essential to personality is not itself sufficient for it. Pure autonomy is end above nature, and in its own intrinsic excellency worthy to be end itself and thus a law to its own action. It gives the inward witness of a right to hold on to its own worthiness as end in every action; and that it behoves itself never to let its action become subservient to any end that collides with its own dignity; and thus affords the spring within itself, in the interest of its own excellency, to control and direct its own agency. The intrinsic excellency and dignity of the being gives its own law to the action of the being, and hence it is no longer pure spontaneity merely, but spontaneity under law, viz., the behest of its own intrinsic excel-

lency. This antithesis of pure spontaneity and pure autonomy has its point of indifference—*i. e.*, a point in which pure spontaneity combines with or comes under the autonomy, and is no longer mere spontaneity but spontaneous act governed; and also in which the pure autonomy combines with the spontaneity, and is no longer mere autonomy but self-law governing. We have, thus, not the two elements in their separate singularity, as set over the one against the other; but in their interaction as in synthesis one with the other, so that we may say that neither is extinct, and that neither in itself is, but a *tertium quid* is, which may be called indifferently a self-act governed, or a self-law governing. In this synthesis of self-action and self-law a will first emerges, and the very essence of person as distinct from thing is in the possession of will. In this only can the being have possession of his own action, and in this *having* of his action comes his capacity *to behave*. Responsibility to his inner self calls for perpetual allegiance to the authority of this inner sovereignty. In the absolute unde-rived I AM, this self-agency and self-law is ever in perfect synthesis, undisturbed by any intruding act or colliding law from any possible quarter, and thus ever a pure will in the tranquillity of its perfect holiness.

When, therefore, we have the element of pure spontaneity and pure autonomy in synthesis, we have a *third* reason-cognition in a completed personality, which is *pure liberty*. Without spontaneity the absolute must be linked in the necessitated successions of nature; without autonomy it must be mere blind and lawless action; but in the synthesis of these there is a will, which may make its alternative to any foreign end, or agency, or law that can obtrude

itself, and thus a liberty. A will in liberty is completed personality.

It is important that we come accurately to discriminate this reason-cognition of pure liberty from all the false and spurious understanding-cognitions of freedom with which it is often confounded; or rather above which it has very generally been denied that it is possible for the intellect to reach; and thus, by denying the possible conception of pure liberty, the entire province of the supernatural has really been discarded. The Deity, proposed to the faith of many an assumed Theist, has been in this way a mere *Naturatus*; a deity bound utterly in the discursive connections of substance and cause. In vain will any assumed terms, borrowed from the supernatural, be brought in to assist us; without a pure liberty we can not rise above nature.

In the operations of cause and effect, when the work is unhindered by any opposition, it is often said that nature is *free*. But all application of the term *freedom* to nature must be with a different acceptation than that it is pure liberty. Nature can in none of its operations be found as an agent controlling its action for itself as end, but is every where going out into effects in which there can be no resting as end, but which always exist only as means to a further end. Nature is wholly a means, and can never cease its action as if it had found its consummation in itself, and had thereby satisfied itself; but must work on interminably, and ever in the line that a previous condition has made already to be necessity. It may be free in this acceptation, that its development has nothing in advance to condition it, and thus its work goes on unhindered. The progressus of cause and effect finds ever an open and unobstructed path-

way. But in all cases the working of nature must be conditioned by something from behind, and urged forward by a force *a tergo*, both that it must be, and be just what it becomes. In no one step of nature is there any alternative; from what already is, that step which is now proximately future must be taken, and must be so taken as has already been conditioned. There is no autonomy, no will, no personality, consequently no liberty.

Again, the animal is often said to *choose*, and that choice is freedom. But the word choice is very ambiguous; and the freedom of choice may be equivocal, with very different meanings in different applications. The *anima* is a sensitive nature superinduced upon a *vegeta*; and animal life is as truly nature as vegetable life. The force of vegetative life is, also, superinduced upon material being; but all the distinguishable forces in material being and that of vegetation are alike nature. And now of all, we may say that they have their affinities or congenialities, and that they thus make selections, and in all cases this selecting may be a force which works unhindered; but by whatever name we call it, we shall be able to see that so far as its freedom is concerned it is in all cases alike, and is simply that of unhindered causation; not at all, that which from the end of its own worthiness can bring in an ethical spring as alternative to nature's conditions, and thus in liberty. Chemical combinations select according to conditioning elective affinities; crystalline formations select the homogeneous from the heterogeneous; the magnet selects the steel-filings from saw-dust; the fire selects the stubble from the stones; the plant selects its own congenial nourishment; the ox selects grass, and the tiger selects flesh; but all these varieties of selec-

tion are alike in nature, and necessitated by their conditions. We may give the name of *choice* to the animal selection; but it is not because there is any approach toward a will in liberty, that may supply an alternative to nature's conditions; and if it seem less appropriate to say the fire chooses than that the animal chooses, it is only as we permit ourselves to be deluded with the false play of the understanding, which would assume to rise from thing and approach to person, by merely modifying discursive conditions. The "half-reasoning elephant," and the "architectural beaver;" the "cunning fox," and the "sagacious dog," all rise to the exercise of a force which concludes in a judgment according to conditions in the sense, and thus come quite within the province of an understanding, and we may thus be less offended by applying to them the attributes of personality than to inanimate, insensate matter; but the one is no more removed from the fixed chain of conditions in nature than the other, and the action of the most intelligent animal is as little in liberty, and as truly necessitated by previous conditions, as the fire or the magnet. All is controlled by the sentient nature, which in every act has its condition in some already conditioned events, and which no amount of sagacity can lift out of the bondage of necessity. That its action in a change of perceived circumstances changes, is no more an index of choice in liberty, than that the current of the stream changes its direction when it meets the obstacle thrust in the way of its progress. The conditions at the time are the events which have come out from a previous period, and are themselves the conditioning facts of what is next to arise; and amid such conditions, neither the magnet, the stream, the vegetable, nor the animal, can bring in the

interest of a dignity in its own personality, as spring to carry itself against, or to throw itself out of the necessitated successions of nature. All its freedom is this, an unhindered progression in following down the current of nature's conditions. The choices of animal nature are component links in this iron chain as truly as the effects of gravity. It is controlled by appetite and thus by nature, not by its own behest in reason, and thus in liberty. Hence the animal is ever thing, and never person ; it has a price, but not a dignity.

Man, also, by so much as he is sentient, is animal only. All the cravings of his sensory are constitutional and thus conditioned, and the action in an appetite and in its gratification is wholly of nature. As animal alone, man has no will in liberty, and thus no more a personality that the brute which perisheth. Except as man has a higher endowment than a sentient nature, and in which he may find an inner witness of an intrinsic excellency and dignity, that forbid all prostitution of itself to be used as means to gain any end of the sensory, but which is imperative that all possible gratification of sentient nature shall be wholly controlled and even thrust aside and beat down for the higher end of its own worthiness, and which may thus take hold upon an interest in its own excellency of being, and resist and subjugate all the clamorous appetites of sense, and hold them in perpetual servitude to its own ethical end, he neither has nor can have any personality nor responsibility, inasmuch as otherwise he can possess no will in liberty. He may bow his personality to the ends of animal gratification, and in his depravity make the ethical to serve the sensual ; but it is because of this inner witness of intrinsic excellency and dignity de-

graded and debased, that he has remorse as a gnawing worm.

His personality in his will is thus enslaved to sense and subjected to nature, but it can never lay aside its high prerogatives and become nature. In its lowest degradation and debasement in guilt, the inner witness of its own intrinsic rights disregarded and sacrificed will give a perpetual self-condemnation, and urge the behest to reassert and regain its rightful supremacy and authority. Man can only thus sell his liberty to the sense against the constant claims of his own personality, and stand every moment self-condemned in his self-degradation. Were he only animal he would ruminate in quiet enjoyment upon the past croppings of sense; it is the recoil of the accusing spirit back upon itself in conscious guilt and debasement, that gives the sting to all man's reflections upon his sensuality. Deprive him of this higher endowment and you leave him wholly to nature, and no matter how extensive his force of understanding in generalizing his own and his fellow's experience, and attaining the rules of prudence and benevolence; he can make neither to be an end, except as he find the want already in the sensory, and that want as conditioned in nature will condition the act, and link that also in the necessities of nature.

But, in determining to the absolute his own right to be himself his end of action, in the dignity of his own excellency, and thus to control his pure activity by his own worthiness as ethical law, and that whatever may be the ends proposed out of himself he may fix upon them or utterly exclude them according to this behest in the inner witnessing of the rights of his own being, we have that

self-agency and self-law which is spring for alternative action to any ends possible to be presented, and thus is ever pure will in the sovereignty of its perfect law of liberty. He is a personality above nature, who may steady Himself against the obtrusion of all ends in a real nature of things or all archetypes in a possible nature of things, and stand utterly unconditioned by an actual or a possible series of condition and conditioned, and answer only to the supreme, all-controlling ethical claims of his inner being, viz., that he magnify his own worthiness as his highest good, and the absolute end and right. This is quite other than the freedom of unhindered causality; or, the choices of sentient nature that go out in gratification for conditioned wants; even the acts of rational Personality in a will, which, though not lawless, has only an ethical law in liberty.

That may be said to be the *good will*, in the acceptation of the *holy will*, which is pure spontaneous act under the ethical law of its own dignity as person; which knows no colliding end with the ethical law; which preserves the perfect tranquillity of finding every end in his own interest perfectly conformed to the ethical end of his own worthiness; and thus never subjected to the conflict of a law in himself with a law out of himself. That would be the *good will* in the sense of the *virtuous will*, which has the colliding of sensual end with ethical end, but which in the conflict ever valorously beats back and subordinates the sensual end. Such may ever have the peace of a strong and watchful government, but never the tranquillity of perfect love. This is self-regnant, the other self-complacent.

The Divine will must ever be the purely holy will in its tranquillity. The Absolute, as pure Uncreated Reason, can

have no ends appealing to any interest in collision with that which is the highest ethical law of Reason; ever to act according to his own rationality, or, as the same thing, worthy of himself. It is thus in the same sense "impossible that God should lie" as it is that "He can not deny Himself." He "ever abideth faithful," inasmuch as within the personality of the absolute reason, it would be absurd that there should be an interest that should collide with the highest rationality. All possible ends must, to the Absolute Reason, be held in subordination to its own end, and this is the control of pure spontaneity by a pure autonomy, and which, as furnishing an alternative to all possible ends as interest, is *pure Liberty*. These three, Spontaneity, Autonomy, and Liberty, are all the elements which determine Personality; and, as in the Ideal of the Absolute, determined in His personality, we are to comprehend universal nature, so in these, we have the primitive Elements of an operation of Comprehension.

SECTION III.

THE A PRIORI COMPREHENSION OF NATURE IN THE PURE PERSONALITY OF THE ABSOLUTE.

PERSONALITY involves pure spontaneity under a pure autonomy, and this is the sole condition of pure liberty. It is a capacity of action in will, and possesses within itself the spring of an alternative to any possible external end which may be proposed to it. This is pure self-determination; not as arbitrament with no end, for this would be the absurdity of

a determination undermined; but an arbitrament *from* the ethical end of its own excellency, and *to* the ethical end of its own worthiness. The supreme intrinsic excellency of the absolute, as person, is itself the reason and the ethical behest that he should not be a means to any end out of Himself. It behoves that he be the user of all possible things, and that he be used by nothing possible. His own agency should be directed by those rights which are inseparable from his own excellency.

All right as ethical exists in personality, and is foundation for the peremptory demand that nature as servant shall find its end in the person, and that no possible end in nature shall be permitted by the person to hold himself in bondage to it. Finite personalities must in this respect be in the likeness of the absolute person, and each be an end in himself which he may never subordinate to any end in nature without violating the rights of personality and making himself guilty of self-degradation. It would thus involve an ethical absurdity that the absolute person, for whose use is all possible nature, might use the finite personality as he may use nature. Nature is not end itself, and can have no rights, and can therefore never rise above the instrumental; personality, even finite, has rights which it would be an unworthiness in the absolute to disregard or invade. The ultimate end and supreme good of the Divine dignity will give an ethical behest that all of material and sentient nature be *used as thing*, and that all of moral being be *treated as person*. A sovereignty supreme and universal, legislating and governing in the right and for the end of his own dignity with a purely holy will, must control the material and moral worlds, by widely different laws; condition-

ing all of the former in the necessitated connections of nature, and holding all of the latter to the responsibilities of "the witness within" as the perfect law of liberty. Nature must glorify its maker as thing to be used for an end not its own; finite personality, as offspring of the Deity, must glorify God in the joyful service which it is its own ethical end lovingly to render.

But such conception of personality, which may originate action from a spring within itself and control a consummation that shall be wholly for itself, is exclusively a reason-conception. To the understanding, all that is personality, or a will in liberty, must be wholly without signification. Its functions can only connect discursively and never contemplate existence comprehensively; and that there should be action from a being who may originate and consummate within himself, must to it be utterly unintelligible. But if we will keep our philosophy here wholly within the province of the supernatural, and not permit the illusions of discursive connections in an understanding to obtrude themselves upon us, we may surely and soundly attain to an *a priori* demonstration. In order to this it is now quite necessary to guard against any deceptive ambiguities in the terms which it may be convenient we should here use. We have transcended the whole region of phenomena as the qualities and events constructed in place and period, and our use of the word *attribute*, as applied to the elements of personality, must not be considered at all the phenomenal *quality* which inheres in a space-filling substance, and may be given in sensation and constructed in a definite quantity.

And so, moreover, have we transcended all the region of the notional, which as substances and causes connect nature

in a universe; and when we now use the terms *influence*, *power*, *essence*, or *source* as referable to person, we must not at all consider these as the physical forces, which in nature may be made to push or pull and thereby modify and displace existing things. Even when it is convenient to borrow words from the understanding, and thus bring up the terms from the natural to the supernatural, and call the absolute a *First Cause*, and speak of the behest of his own dignity as *causative determiner* of his acts, or of the will as *causality* of the personal agency, we are by no means to allow ourselves to come under the delusion, as if with the terms there had come up the things of nature, and that such supernatural causation had any connection with nature's causes in their necessitated conditions. If the words are sometimes borrowed, the meanings must never be confounded. The attributes and causalities of the supernatural both transcend and comprehend the qualities and causalities of the natural. All the substantiality and causality of nature originate in, and are used by, the absolute will in liberty. Thus carefully discriminating our reason-conceptions of personality from all understanding-conceptions of things in nature, we now proceed to the consideration of a possible comprehension of universal nature in the absolute personality.

As incorporeal and uncreated reason and will, the absolute has his own spring of action within himself, and in this a power in liberty which is wholly above and separate from all force in nature, and which may be creative of force. He may originate simple acts which, in their own simplicity, have no counter-agency and can therefore never be brought under any of the conditions of space and time and nature.

From his own inner capacity of self-determination he

may designedly put simple acts in counteraction and at their point of counter-agency a force begins which takes a position in space and occupies an instant in time. There is a beginning in something where nothing was; and this has position, instant, and permanence. The perpetuated energizing in counteraction is creation in progress, inasmuch as force accumulates about that point of antagonism, and enspheres itself upon it as a center; and a space is thereby filled, which may be conjoined in a definite figure; a time is thus occupied which may be conjoined in a definite period; and an impenetrable substance is made, which may give content in a sensibility, and be conjoined in a definite phenomenon. Above that point of counter-agency all is *simple activity*—unphenomenal and unsubstantial, and having all its essentiality in the power of the supernatural as will in liberty; in, and below that point all is *force*—phenomenal in the perception of the sense, and substantial and causal in the judgment of the understanding, and existing as physical nature in its necessitated conditions. In this substance, place in its own one whole of space is determinable; and in this also, as source for successive events, period in one whole of time may be determined; and thus an existence is given in a space and a time, which can not come and depart as in a mirror or a dream. The energizing of the absolute will* may fill so much of this one whole of space, and do this in so much of this one whole of time, as shall be directed by the archetypa rule of his artistic wisdom; and may give the modifications of distinguishable forces, also, in accordance with such rule; and all for the end of his own worthiness: and thus, at the fiat of the absolute will, nature is, with all her substances, causes and reciprocal forces, and with all the tribes of vege-

table, animal, and human beings. God need only to will it, "and for His pleasure they are." Nature henceforth goes on in her development according to the law of physical forces, and is perpetually a *natura naturans*; but, at the great central point of all counter-working, and in all the points of a superposition of distinguishable forces, a conditioning of nature is determined by the absolute in his own liberty, and thus all nature is still *natura naturata*. Physical causes perpetually work on, and all is thus *causa causans*; but all these causes are conditioned in their sources by the self-determining will of the absolute, and are thus *causa causata*. The power which imposes conditions upon nature, and gives causality to causes, is wholly above all the conditions and causes of nature, and with nothing of the necessities of physical force, has no other controller than the supreme artistic wisdom under the behest of the absolute in liberty. And still further, while this space-filling force takes its place in space, and is impenetrable, inasmuch as it can admit the substance of no other space-filling force into its locality except in its own displacement, so also is all the reflex action of this engendered and ensphered force sustained upon the central point of the primal antagonism. Action and reaction, attraction and repulsion, centripetal and centrifugal agency fill the whole sphere of universal nature; but no working of physical forces can press back of the central point in which they have their genesis, and invade the world of the supernatural. The Deity needs but to will the counteraction in its perpetuated force, and universal nature finds its equilibrium in the repulsion from the center and the reflex pressure to the center, and holds itself suspended on its own conditioned forces, without the possibility of any weariness

or exhaustion to its maker. It is wholly the product of the Divine will, and wholly the act of the absolute; and while utterly dependent for its being upon the Divine will, can yet never react upon or in any way condition the being and agency of the omnipotent producer. It is thereby a veritable creation distinct from its creator, of which it may intelligently be affirmed, that the creator is conditional for it, but it in no wise conditions the creator. Within it are contained all the series of conditioned and thus of necessitated successions; and from the rudimental germs in their primal creation as distinguishable forces, is already determined the fact and the order of development. The conditions for ensphering worlds; for centripetal and centrifugal forces, and the ratios of their action both as to quantity and distance from the center; their revolutions upon their axes, and their orbits about their primaries; and the relative inclination of the planes of these orbits, and of the axes of the spheres to them, and of the proportions of the axes of each to their equatorial diameters; and, in short, the whole formal arrangements of the universe are given in the very points where the primordial forces have their genesis; as is also the whole science of nature in its original bi-polar, chemical, crystalline, vegetable and animal forces. An *a priori* philosophy may long be detained in this broad field, before it shall be competent to detect all these forces in their distinguishable rudiments, but their laws, and thus all their possible conditioned changes, have already been settled in their creation, and may be determined.

All this context of conditions, constituting universal nature, is dependent, while the absolute maker is wholly independent; it is his creature and subjected to his use.

He is its Lord, and has the right of sovereignty over it to make it subservient to the end of His own dignity. It is, only because He is ; and the ethical behest of his own excellency has summoned it to fill its place, and endure its time, and subserve His purpose. God made it, and is wholly independent of it; and thus both Atheism and Pantheism are utterly excluded, in this reason-cognition of the absolute as person. This determination of an origin to nature, in its own space and time, is a complete comprehension of nature on the side of nature's beginning.

And now, that on the other side we may comprehend nature in its *consummation*, we have the same compass of an all-embracing reason in the absolute as personality, and who as having the final end of all His agency in Himself, must govern and direct all of nature to the end for which it has been created by Him. The Supreme Architect must have the archetypes of all possible nature in His own subjective apprehension. There is no inward craving want of a sensory, which may subject the will to the bondage of a blind necessity in going out to gratify it, nor put the will in a perpetually militant attitude in resisting it; but there is the one high and controlling behest of His own excellency, that every possible end shall be determined in subserviency to the right of His own worthiness. It is the highest rationality, that the absolute reason be Himself the end of all ends. This inward ethical spring to all action finds no possible collision in the Divine bosom, and nothing hinders His will in the sweet and loving execution of an eternally steady and tranquil disposing of itself to the ultimate end of His own glory. In this is pure and perfect holiness; and it will control the artistic selection and execution, from amid all

possible archetypal creations, to that which will be most worthy of His own making and accepting. There is a measuring of things by things, but no thing can be an absolute good. The measure of all things is in the personality of reason, and the absolute reason is the perfection and glory of all possible persons; and whatever magnifies *His* dignity will include the exaltation of finite personality. The supreme good for all moral personality is this unbroken reign of the Divine Holiness. And this grand end in all the works of God must secure an optimism in nature, as the product of His creative power. His will must be on that archetype which in the end of His reason is the most reasonable; in the end of supreme loveliness, is the most lovely; in the end of an excellency above all price, is the most excellent; and in the presence of a dignity where all finite worth fades, is the most worthy.

In this autocracy and autonomy of the Deity, we have the ultimate and complete measure of His creation. In the tranquil self-possession of a perfectly holy will lies his eternal purpose; and the steady agency moves on in artistic wisdom, to the fulfillment of His settled counsel. Material worlds and systems, with their distinguishable forces as substances in their causality, are made and arranged in their order and perfection of mechanical adaptation, action and movement; and the rich abundance and beauty, which vegetative life throws over the surface of the green earth, are brought out; and the changing seasons with the changing years roll on, and day and night, and "sweet return of morn and eve" are in perpetual alternations. But not in this perfection of arranged forces, though worthy of the power and manifold wisdom of the absolute maker, shall we

find the ultimate end for which the Almighty works. He is more than artistic perfection, and may not permit His action to be exhausted in the satisfaction of the artist. He is architect only in subserviency to a higher end in a higher excellency, and material worlds with all their furniture exist only as instruments to be used for a higher behest. Sentient tribes of living beings people these wide fields, and gather the good harvest of nature, and live in gladness and joy on this bounty, and thus in addition to the wider action of artistic skill in the adaptations of material, vegetable and animal nature, we have the much higher product of animal enjoyment and happiness. But God is good in the acceptance of bountiful and beneficent, only that it may subserve a much higher intrinsic excellency in His being, than that He should be benevolent. Human beings, to whom may be given an intelligent apprehension of that which is rule for their highest happiness, and an immortality, that they might endlessly obey and enjoy, would so far be only of nature; and their rule of life, a generalization of experience as they found it to be; and their obligation to obey, not any thing of ethical worth and dignity, but solely as slaves to a nature than can pay in pleasure or in pain. Their ultimate master would be the power of the leviathan who may caress or torture; and their only virtue would be that they work on with the eye on the greatest wages before them, and the consciousness of the lash behind. But God is author of the nature which rewards and punishes, for a much higher end in Himself than that so He must do if He would satisfy a want He finds in Himself to be made happy by making others happy. This would leave Him the slave to a necessity as tyrannical as that of the animal, and stretch the

iron chain of nature completely around Him. There is here nowhere a will in liberty but the mere brute *arbitrium* of nature's strongest craving. The Deity should not thus exhaust his action in giving laws to nature, from which the rules of prudence in attaining the greatest happiness on the whole may be derived, and this only to sit by and enjoy Himself the happiness, which this on-going of nature may work out for Him in the perceived happiness of His creatures.

It is no possible craving want to be gratified that can be the ultimate end and law of the absolute power, and which must at once condition the absolute, and exclude from the prerogative of personality with a will in liberty; but it is an ethical interest in reason alone, which in its own right demands when and how and what the happiness shall be, and what artistic arrangements shall be given to nature, conditioning the happiness it shall work out. God will keep His benevolence subservient to His holiness, and make it to find its end in His own worthiness, and impart happiness in no way that shall be derogatory to His essential excellency and dignity. And this discloses at once the crowning end of the whole physical creation, with all its sentient happiness, viz., that it may subserve a personal and moral creation, in its advancement of virtue and holiness to such a degree of dignity and moral worth, as the ethical behest of His own person will admit that the absolute Author should secure.

The absolute fully comprehends Himself, and fathoms all the depths of His own being, and has other and far higher capabilities than any material or sentient organizations can exhaust. To create and superintend the development of

only such forces could not reach the ultimate end of His own worthiness, inasmuch as it would be a termination in the less while He held within Himself the archetypes of the greater, and involve the absurdity that the absolute reason should satisfy itself with something other than reason. Its behest must be the maximum of archetype, and the consummation of working. A moral world—a system made up of varied orders and ranks of persons in liberty—will be brought into existence; and thus, the congeniality of accordant being, in reciprocal communion and affection, will be disclosed. There may then be an ethical society, governed by the spring which the “inward witness” of what is due to each in the worthiness of His own personality shall give; and the whole rewarding itself, in the blessedness which accrues to each in the holiness and blessedness of all, and God and His moral creation come together in a reciprocity of holy love. Somewhere, this moral world will be brought in connection with the conditions of the physical world; and all the adaptations of material, vegetable, and sentient being be found to have their end in the interests of the moral system. A race of beings, compounded of the material, sentient and moral, may be created; and thus that which is personal becomes incarnate, and the free is subjected to the colliding action of the necessitated, and personal liberty is put upon its probation in conflict with the conditioned force of nature, and through this one point of connection with nature, a modifying influence is consequently carried over all the sphere of moral being. God will use the natural for the ends of the moral; and he will govern the moral, by ethical laws and influences which originate in the behest of his own intrinsic excellency and dignity.

When the ends of nature are kept wholly subordinate to the ethical end of personality, then are the physical and the moral worlds in harmony, and the entire creation of God is good, and "the morning stars sing together."

Sin may enter by any prostitution of an ethical claim to a physical want, or by any assumption of the finite reason above its proportionate excellency, and become a soul-sin, but this must be somewhere below the Creator, and from the creature-personality; inasmuch as no colliding want can reach to the absolute, and sin enter through him; and no moral responsibility to an "inner witness" can be found in physical nature, and sin inhere in it. Through any finite personality sin may come in; and that it should come in somewhere, in any possible modification of a moral system in its necessary subjection to a conditioned nature, may be a certainty to the omniscience of the absolute, except in such interposition for prevention as would compromise the higher ultimate end in the behest of his own dignity. God may not lay aside his own dignity, and act unworthy of his own excellency, to save a moral creation from ruin. He may not leave the throne of sovereignty, ethically his in his own intrinsic excellency, and permit himself to be used as a servant and instrument for some other end that then takes the throne; even though it be the holiness and blessedness of a moral universe. What he may do, he will do to exclude sin; both in the use of sentient nature as a penalty, and when sin has entered, in its use as a tabernacle for divinity to "set forth a propitiation, to declare his righteousness;" but not for the prevention of nor the redemption from sin will God "deny himself." He will so create natural and moral worlds, and so arrange them in their connec-

tions, and so act upon them in all his agency, as shall completely meet the end of his own worthiness; and give that archetype as the pattern for artistic wisdom, which, of all possible ways for creating energy and governmental influence to go forth, shall be most reasonable, most lovely, most righteous and holy, when tried in his presence, and by the ethical rights and claims of his own personality. This must comprehend every event in nature, every act in the moral world, and conclude the entire creation in that final consummation of the whole plan and work, when it shall be worthy to be presented to, and accepted by the God and Judge of all. Then shall come the full and eternal chorus, "and every creature which is in heaven, and on the earth, and under the earth, and such as are in the sea, and all that are in them, shall be heard saying, Blessing and honor and glory and power be unto him that sitteth upon the throne, and unto the Lamb for ever and ever."

Here, therefore, in the complete ideal of the absolute in personality, it is possible that we may attain to a perfect and entire comprehension of nature, and indeed of all creation physical and moral. A nature of things may originate in the Deity as personal creator in liberty, and stand out distinct from, and wholly excluded from all conditioning reaction upon, the Deity; while itself is dependent upon, and subjected to, his supreme will. We no longer seek a resting place through the discursions of the understanding, where we must ever be hastening the footstep from the conditioned to a higher condition; but we have found a conception for a safe and permanent source of all things, in the self-sufficiency of an absolute, personal Deity. Nor do we run on the interminable line of final

causes, and find one thing to end only in that which must yet run on to some further end; but we have a *summum bonum*, and ultimate end, in the intrinsic worth and reverence due to the absolute personal God, before whom all his creation should stand uncovered. The chain of nature's conditioned events may lengthen down the depths of the void below, but the hand out of which it comes forbids all anxiety lest unsupported it should fall, and nature be extinguished; or, lest it should go on downward with no aim but to lose itself in unfathomed emptiness. Nature has a beginning; a guide; a consummation; and in this, nature is completely comprehended; nor is it possible that in any other manner, it should find its comprehension.

The complete Idea of the Reason, as faculty for an operation of Comprehension, is thus given in the compass of the Absolute in personality. *Nature may be comprehended in a pure Spontaneity, Autonomy, and Liberty:* or, which is the same thing—*Reason may comprehend Nature in the compass of an Absolute Person.*

CHAPTER II.

THE REASON IN ITS OBJECTIVE LAW.



FINITE AND ABSOLUTE PERSONALITY.

COMPREHENSION determines things in their origin and their consummation, and which we have already seen is only to be effected through a free personality. Sense can merely *conjoin* in definite place and period, and thereby give in consciousness the arising and departing phenomenon; but can not tell whence it cometh, nor whither it goeth. An understanding can merely *connect* the phenomena in their substances and causes, and thereby give to the flowing events in nature a perduring substratum of existence which ever is, and only changes its modes of being and manifestation; but can not say, what is origin for this substance in its causality, nor to what consummation these changes in nature are tending. It may go up and down the interminable series of changing events, but can by no means overleap the linked conditions and determine from whence the whole have come, nor whither the whole will find their end; and in such perpetual running from link to link there can never be effected a comprehension of the entire chain.

The reason is the only faculty for *comprehending*, and this by encompassing both origin and end in a personal author.

We have determined the *a priori* possibility of such comprehending operation, in the compass of a personality in liberty, and in this have attained to the complete idea of an all-embracing reason. But thus far, the all-comprehending reason is only a void conception. We have not yet found such a comprehending faculty in actual being and operation. So it *may* be; so, if at all, it *must* be; but that so it *is*, we have yet to find. Our remaining task is this, that we take any facts which may present themselves in the whole field of a comprehending agency and find whether they come at once within the actual colligation of this law of free personality. It is incumbent, that from these various facts, we should show that a comprehension of things reaches so far as, and no farther than, an applied law of personality in liberty reaches. This will give the accordance of Idea and Law which has all along been our criterion of true science. This will perfect our entire Psychological System; but as in the sense and the understanding we gave an outline of the Ontological Demonstration of their objects, we will here do the same for the objects of the reason—The SOUL, GOD, and IMMORTALITY.

We shall find an occasion for distinguishing these facts of a comprehending agency and putting them into two separate classes, accordingly as they belong to a world of a *finite* or of an *absolute* personality.

We shall find that a finite personality is the compass by which we comprehend one class of these facts, and the absolute personality the compass by which we comprehend the other; and to mark the distinction between these, it is im-

portant that we familiarize ourselves to the following considerations.

We may speak of a *sensorium*, reached by any content as quality given in an organ of sense, and thus excited, becoming capacity for sensation; and all this will lie wholly within the fixed conditions of nature; and the phenomena which it will give occasion for constructing in consciousness, and thus all perceptions, will stand wholly within necessitated conditions. We may also speak of a *sensory* as more deeply subjective, reached by the perceived objects and thus excited becoming capacity for appetite in any way of a constitutional craving or want, and all this will be within the linked conditions of nature; and the desires, as well as perceptions, will be necessitated. The entire sensibility, call it *sensorium* or *sensory*, capacity for perceiving or wanting, is wholly within nature.

The perceptions of objects may vary, and remembered consequences of former gratifications may modify desires, and changed circumstances may demand a changed course of action to secure the object wanted, and all this will induce a judgment relative to the ends of a sentient nature according to what is actually given in the sense, and which must thus change as the perceived circumstances and wants have changed; but all this will still be controlled wholly by the conditions of nature, and an animal understanding will be mere instinctive subtlety or brute sagacity, and held completely in servitude to the conditions imposed upon it. Even should we admit a generalizing of all experience, and thereby a rule of highest gratification in the aggregate, and in this the dictate of prudence; the whole would still be within the bondage of necessity, and the perception and the appe-

tite and the judgment all conditioned in nature, and no other prerogative would be gained than a mere expansion of an animal understanding necessitated in all its judgments, its wants, and its gratifications. Its aggregate want in its prudential judgment would be conditioned and would itself condition the act to gratify, as truly as in the craving of particular appetites. In no way can the merely sentient force rise above nature.

Man has within him, all the distinguishable forces of *material* being; and, as material, is conditioned in nature as truly as the clods on which he treads. He has also *animal* life; yet this, in the furthest extension of sentient wants and sentient gratifications, and in the highest generalizations of consequences in an attained experience, gives to him no prerogatives above his fellows of the stall or of the sty; but he, equally with all animal nature, is wrapped about by the iron chain of necessitated successions. The *degree* is nothing but a consideration of a longer or a shorter chain; the *kind* of connections, as animal, in man and in brute is the same. We have in nature, throughout, a superinducing of distinguishable forces one upon another, the last using the former for its own ends, yet itself still held in all the conditions of the former but as it overrules without extinguishing them; and in this, different grades of space-filling substances are given, while all are ensphered about a common center, the whole of which is the *physical universe*, bound every where in conditions which make it a fixed nature of things through its perpetual development.

And, again, in contradiction to the *physical* we have the *ethical world*. The intrinsic excellency of the absolute is the central law of the moral universe. The spirit of God

knoweth perfectly what is in God, and this inner witness of his own excellency and dignity is the consciousness of his own right, and what alone is worthy of him, and is thus inner law as a divine conscience in the autonomy of his own being. In this is also an ethical spring for the direction of his own agency, and in this self-determining capacity lies the Divine will. And as, moreover, there is in this will, self-determined in the right of his own excellency, an alternative to any other end which can be presented, than his own dignity, so there is here a will in liberty. This determines personality to the Deity; and as ever self-determined in self-complacency, with no colliding ends to disturb the perpetual tranquillity, we have in this, properly, the HOLY and the EVER BLESSED GOD.

|| Man, as spiritual, is the offspring of the Deity, and although only finite rationality is yet in the very likeness of the absolute reason. To every finite spirit there is the inward witness of its own intrinsic dignity and excellence, and thus a knowledge of what is worthy of itself in its own righteous claim, and thereby a conscience as law within written on the heart. In this is spring for an alternative to any colliding end that may come before the man, and thus a will in liberty is his endowment. The yielding of the good will to any colliding end whatever is a degrading servitude, and makes it to be a depraved will; and the valorous beating back and holding in subjection every want of nature to the worthiness of the spiritual, becomes the virtuous will. The will of the holy God and of the virtuous man are directed by the same principle, the intrinsic excellency and dignity of the spiritual; and the inner witness differs only in this, that in God it is an absolute reason and in man it is a finite ration-

ality, which in its excellence gives energy to conscience. The will of God, in whatever way made known to man, will thus come to his conscience as the right of the absolute, and which it will be imperative that he should obey on the ground that the finite excellency can not otherwise maintain its own worthiness, but must really debase itself by any rebellion against the absolute, and bring the conviction of degradation and guilt to its own conscience; and where there is this disobedience of the finite, it will behoove that the absolute inflict penalty on the ground that thus he should vindicate his own dignity, and sustain a worthiness that must be revered.

The intrinsic excellence of rational spirit is every where and law, and the inward witness of what is its right is the ULTIMATE RIGHT; and every where holds all personality responsible each to his own conscience. The absolute right includes the finite, and in this harmonizes all possible ethical claim through all possible persons, and makes of all possible grades of spiritual being an ensphered moral universe. Any part acts unworthy of itself and in violation of the right of the whole, when any colliding want carries the will in servitude to it; and the vindictive penalty for such violation must be made to meet every sinner, through his own conscience. In this, we have an ensphered moral world, held together by the law of liberty, as the ensphered physical world is held together by the law of conditioning forces and these two spheres meeting and intersecting in man. || So far as man is only material or animal he is wholly nature, so far as he is purely spiritual he is wholly supernatural; but as the two spheres of nature and of rational spirit come together in man, and thus make him to be neither mere ani-

mal nor pure spirit, we have that complex existence which we call a *human being*.} So much of the natural as is thus put in combination with the rational, constitutes that which, as entire, we properly term the *world of humanity*. The law of the sentient in this world of humanity is wholly of nature, and may be called *appetitive*; the law of the spiritual is wholly of reason, and may be known as *imperative*.

And now, our object is to gather these facts where there is any comprehension of things in their origin and end, and see whether they may all be held in colligation by this hypothesis of a free personality. In nature we shall not expect to find such facts of a comprehending agency on this hypothesis, inasmuch as in nature there can be no free personality. Within the field of humanity, inasmuch as we now assume that it is not all nature, we may expect to find some facts to be comprehended in the free though finite personality with which humanity is endowed. But in the broad field encompassed by Divinity, we must anticipate the most satisfactory instances of an all-embracing reason, as practicable and actual only through a manifest application of the law of an absolute personality in liberty. If we find the comprehension to be only as we apply the free personality, and always when we do so, and precisely to the degree in which we are able to do so, it will prove itself to be the actual law, holding all facts of a comprehending reason in colligation by virtue of its own universality. We shall thus need two Sections for the classification of facts under the *finite*, and under the *absolute* personality in liberty.

SECTION I.

THE FACTS OF A COMPREHENDING REASON WHICH COME
WITHIN THE COMPASS OF A FINITE PERSONALITY.

HUMANITY in its sentient nature comprehends nothing, and only as it rises within the sphere of the rational, and stands out in the prerogatives of its free personality, can it possess the conditioning law for all comprehension. The perceptions and wants and judgments are wholly enchained in the prison-house of nature, and all intelligence circumscribed and concluded with no comprehensive capacity; and only as man awakes in the higher consciousness of rationality and freedom does he know, or even dream of or care for, any existence beyond his dungeon, or have any impulse to inquire what he or his prison of nature is. But we have assumed for man the prerogative of a spiritual being, and in virtue of a free personality habitant in humanity, we are now to induce a variety of facts in this field, which will evince for themselves the actual law of freedom as the only hypothesis by which they may be brought in colligation. These facts of a comprehending capacity will, indeed, include all that distinguishes man from brute, inasmuch as it is only in that which is elementary in his personality that any discrimination of an order of being can be made. In virtue of this only is it that he can rise above nature and comprehend his own operations and products, while the brute is all nature and can comprehend nothing.

But, for the clear apprehension of the degrees of freedom, and the peculiar springs which may give an alternative

to sentient wants, in the finite personality which inhabits every human breast, it is important that we attain the peculiarities of the world of humanity, as lying solely in that region which is formed by the mutual intersection of the two spheres of the physical and the ethical systems. This intersection, and consequent mutual interaction and composition of the two, modifies each; and thus, neither the physical nor the ethical is as it would be in its separate existence. The sentient force does not act alone, but has the influence upon it of the rational power; the rational spirit is not incorporeal, but is subjected to the colliding desires of the sense. There may thus be modifications, and mediate degrees of freedom, between the utterly conditioned in the merely sentient nature, and the unruffled calm in a purely holy ethical agency. How this may be, it is not difficult to trace; and it is directly in the way of preparation for the attaining and classifying of our contemplated facts of a comprehending agency, that we show the discriminating points in the different springs, which in its rational interest may give to humanity a freedom from the bondage of its sentient wants.

The craving in the wants of sentient life, solely considered, we have termed *appetite*; and under this we include all the constitutional sentient cravings though sometimes called by softer names, as sympathies, affections, etc. When the force of excited appetite is toward gratification, it is known as *desire*; when it is turned away from its object in disgust it is known as *aversion*. But without further discrimination, it may be sufficient to let the whole of conditioned sentient nature be known as *appetitive*. On the other hand in the ethical world, the claims which an inner

witness of the intrinsic dignity of rational personality possesses in its own right, we have termed *behests* ; and as inclusive of all pure personality, whether of the absolute or the finite, it may be sufficient here that we speak of all purely ethical being as in its own right *imperative*.

In the sentient nature, every thing *works for wages*. It is conditioned in the happiness it wants, and in the way to attain it ; and it must work, and work in such a manner, or starve. Its highest law is gratification of want, called love of happiness, and is wholly of physical necessity. On the other hand in the rational personality, all *acts in complacency*. It is pleased with the behest, for it is its own, and in the right of its own excellency ; it is tranquil in its action, for no colliding end disturbs it. Its highest law of action is the inward witness of its own dignity, called love of right, and is wholly liberty in its own lawfulness. The sentient works as means to an end imposed upon it, and is worth so much as nature pays for it in gratification ; the personal acts in its own right and blesses itself in its own worthiness, and has no price in barter but a dignity to which it were the highest affront to offer any thing in exchange. The sentient satiates itself and rests in a surfeit ; the rational maintains its dignity, and has the tranquil bliss of unwearied holiness.

When, now, we have the two spheres in mutual intersection, and spirituality given incarnate as in humanity, to the full extent of this intersection must we have reciprocal modification, and by so much must the experience of humanity differ from mere sense or from pure reason. It will not be all animal and thus wholly the brute, nor will it be all spiritual and thus wholly the divine. It will have both a price and a dignity ; a law of happiness and a law of right-

eousness; an appetitive nature and an imperative personality. And here, between the solely appetitive in the animal and the purely imperative in the spiritual, is the region of humanity compounded of both. Such a complex existence may well give rise to that in an experience which is neither a craving want nor an ethical behest; but which may be spring for action alternative to any thing of the sentient, and thus give a modification of freedom, though it be not in the claim of a moral right. And such a spring may vary in successive modifications, according as the rational makes use of the lower or the higher elements in the sentient for its own ends. To just such an extent may humanity become creative, and make and enjoy its own products in its own sphere, and thus so far be comprehending agency because so far it may originate and consummate as author and designer. In such creations there will not be *work* as in the service of the sense, nor will there be the *holy tranquillity* as in the pure ethical activity of the spirit; but in proportion as it is spirit using sense for the ends of its own rationality, and thus controlling and not controlled, there may be a *serene interest* that rises as the product rises in the ends of the reason, and carrying humanity from the very confines of the animal in savage life upwards in culture to the border of the ethical, which controls every faculty in duty and for the dignity of the rational personality. This impulse in humanity which is neither that of craving appetite in the sense nor of sovereign behest in the spirit, but a serene interest in some end in the reason, has been termed the *play-impulse*; inasmuch as on one side there is no servility, and on the other there is no reverence. The reason uses its connection with the sense, not for any end of the sense; not in

the ethical behest of its own dignity ; but simply in the interest of its own cheerfulness. It plays with nature, not in frivolity as a sense-play ; but with the elevating and invigorating exercise of a sportive rationality. It is this impulse, which takes us from sensuality, and raises us through the beauty of art, and the truth of science, up to the duties of morality and the sanctities of religion. We play with beauty, and cheer ourselves with the pursuit of truth, and thus lift ourselves above the slavery of appetite, and are prepared for the ethical claims upon our personality, either in duty or in adoration. The free personality is present in art and science, as truly as in morality.

Having thus indicated the region in humanity from which we are to gather the facts which have their comprehension in its free personality, we shall now, at once, enter on the work of induction, and having reference only to such as come within the compass of a finite personality, we will make it sufficiently broad to show that we have the operations of a comprehending reason in humanity, and that it is every where, and only, through the freedom of that which is rational and personal. We shall classify them under the several heads indicated by the different interests which give their spring to the producing agency.

1. *Æsthetic facts*.—The merely animal sentient nature finds that which is *agreeable* in all the five senses. There is the appetitive force inducing a craving for its object of gratification in them all. The agreeable sensations from temperature, odors, and viands, as merely animal, will be more intensely appetitive than colors and sounds ; and thus the senses of feeling, smelling, and tasting, are more important, as sources of gratification, to the animal than seeing and

hearing. Doubtless, also, the mere animal may re-produce, in a dreaming fancy other than distinct memory, the fictions of past sensations, and so far live in the enjoyment of fancied happiness; and in such a world of the animal fancy, it is just as little to be doubted that feelings, smells and tastes will have an ascendancy, as fictions, quite as decidedly over sounds and sights, as they have in actual animal gratification. Let the animal nature do what it may, in actual gratification or fancy, and it will obey the conditions of appetite.

But, we find this remarkable fact in humanity, that the two senses least intensely appetitive are the sole media through which the play-impulse can be at all reached. Sights and sounds have ever their definite outlines, and we can give shape to the color and form in tune to the sound. It is not so much the object seen and heard, as the form in which it appears that interests us. Our pleasure is not in the *matter*, but in the *form* in which the matter comes to us. Nor is it every form that pleases, much less that it is mere form; it must be such form as may blend with life, and figure to the mind some in-dwelling emotion. It must touch some chord of sentient life, and awaken *sentiment*, and is thus æsthetic. Its life is sentimental. The murmur of the waterfall, the sighing of the wind, the very silence of the night, must all put on a living form; and the landscape, the fountain, the sky, the rosy dawn or crimson eve, must all glow with an inner life, and the form be vitalized and not some dry and dead husks, which life has thrown aside as its mere exuviae. Not that there is life; not that there is form; but that there is life *in* form, that there is *living form*, is there *beauty*. This is every where in nature, coming to man as a perpetual visitant through the eye and

ear, yea, as a constant presence where we have but to awake in consciousness and find ourselves ever gladdened by it.

“There’s beauty all around our paths,
If but our watchful eyes,
Can trace it midst familiar things,
And through their lowly guise.”

All this, though in nature, is as nothing to the mere animal. Humanity finds it, separates the mere matter from it, and has the beauty of nature in its pure living forms as objective to daily contemplation. But much more than this. Humanity is not restricted to beauty as nature gives it; the whole world of art belongs to man, and he may fill it with his own living forms of beauty. Here lies his æsthetic power. He may not only find what beauty nature has, and take it purified from nature and make it his own; but he can create for himself a beauty more perfect than nature anywhere can give to him, and put his own Apollos into nature, and from his own perfect ideal beauty criticise the beauty of both nature and art. He plays with nature, with his own productions of the pencil and the chisel, and sports in a subjective ideal world of beauty more rich and glowing in its living forms than matter can anywhere take upon itself, and his inner ear hears music, and his inner eye sees blended color and shape in living expression, which no combinations or sublimations of matter may convey to outer hearing or sight. How completely can he include all that is or may be, in any general class of beauty “in earth or sky or human form or face divine,” within his more complete ideal archetype! How effectually comprehend both nature and art, as made objective, in his all-encompassing subjective creations! Here are all the facts of an æsthetic comprehension, on which

we need not longer dwell, and whose particulars we need not minutely recapitulate, and the only inquiry important for us now, though in the midst of so much to interest, is simply for the law which holds all these facts in colligation. Whence the spring and interest in this play-impulse? and how does humanity comprehend its own apart from nature, and draw the encompassing line around the world of art? And how say that nature, in all her forms of beauty, is yet included in the more complete æsthetic world? All this it is not difficult to answer, and the answer reveals the law which holds in colligation all the facts of an æsthetic comprehension.

Take from humanity its free personality, and leave all that is animal unweakened and unrestrained in its sentient force, and you will have simply *the agreeable*—the appetitive want and the conforming gratification. Put the rational into humanity, that it may separate the living form from the material in nature, and you will have *the beautiful*—the serene interest in and the cheering contemplation of reason upon, its rational forms, which express sentient life. Shut this rational up so completely within nature, that it must go only to the forms in nature for its beauty, and take what nature has, and satisfy itself with what nature gives, and you have imprisoned it within nature and bound it in servitude to nature; and now, although you can not quench its interest in beauty above all appetite, yet you compel it to drudge in nature and work on nature's conditions for nature's wages, and it is cheerful play-impulse no longer. But, merely let the sphere of the rational intersect the sphere of the physical, and while the rational and the animal are compounded in humanity, let the rational have its own pure sphere stretching away beyond all intersection with the physical; and thus,

that the rational can both act within nature and elevate itself above nature; and either find nature's own beautiful form or put its own, impressed upon the material as art, within nature; or, in the productive imagination, blend its own forms amid the colors and sounds of nature; or, quite away from nature create its own pure ideals in its own subjective being; and in all this, you have a free personality, which comes within and excludes itself from nature at its pleasure, and may make nature its play-ground and not its workshop.

And such is manifestly the æsthetic law of humanity—a law of liberty in personality. Beauty must dwell in living forms; and must be contemplated to be known; and so far the world of beauty is conditioned to space and time, and there can not be an absolute beauty. But humanity is not shut up to nature for its beauty. It can create its own; and judge nature's beauty by its own; and put its own, as art, into nature, or keep it as subjective ideal out of nature; and separate its own from nature, and comprehend its own as originated and consummated in its own action; and can encompass nature's beauty by the greater completeness of its own expressed sentiment. Humanity is thus æsthetic comprehension, solely from the prerogative of its free personality.

2. *Mathematical Facts.*—Humanity is competent to fulfill all the claims of a pure mathematical science. Man constructs particular diagrams, and in a process of intuition attains universal demonstrations. That this can not be in virtue of the animal element of his being is sufficiently manifest from the fact that no animal, however sagacious in concluding from experience, ever rises to the most simple intuitions in the region of pure mathematical science. We may

soon determine why this must be so; inasmuch as nothing of the sphere of the rational comes within the sensual nature of the sphere, and there is no free personality that capacitates for *à priori* constructions in which may be found universal demonstrations.

The brute constructs the content in the sensibility into a phenomenon as perfectly as man, and in some cases of animal vision the perception is more acute and minutely exact than through the human organ. To the mere animal, there may thus be all the empirical intuitions of greater and less, container and contained, like and unlike, etc.; and the capacity to change the outward action, from a change in the perceptions, may be within the endowment of mere brute nature. There may be widely different degrees of brute sagacity, from a less or more restricted capacity to judge according to sense, but in the highest exhibitions of it, the whole will stop within the empirical intuition, and can never reach the region of pure intuition. The animal judgment controls no further than taught by sense in experience, and can use only what it perceives or remembers; but can construct no pure diagrams in which an *à priori* necessity and universality is attained, and from which alone pure mathematical demonstration can be educéd.

Man, on the other hand, constructs his pure forms, not at all as the copies from perceived or remembered phenomena, but perfect and complete beyond what any experience can attain; and these pure figures he combines in varied diagrams according to the purposes of the demonstration, and in these combined pure figures he carries his intuition onward step by step, till he attains his conclusion. Nor is it at all necessary that he should construct new diagrams and

attain new conclusions for every particular of a class, nor even to so multiply them as to deduce a general rule from the many examples; his one demonstration is as conclusive for the universal as for the particular. When he has constructed three points in the same plane in pure space, he has not only this intuition that these three points *are* in the same plane, but his diagram is quite sufficient also for the intuition in a universal axiom, that any three points in space *must ever lie* in the same plane. Once, to demonstrate the three angles of a triangle to be together equal to two right angles, is a demonstration in the particular conclusive for the universal. And here man may multiply his diagrams and enlarge the field of his mathematical demonstrations, and his mathematical science will be comprehended within his constructions and the intuitive processes through which he passes to his conclusions. Men may widely differ as mathematicians, but in all cases their mathematical science is as their constructed diagrams and their completed processes of intuition. And so of humanity entire, we can say, that it is mathematician in so far as it constructs pure diagrams and completes the processes of distinct intuitions. We have the facts of a comprehending agency in this field of mathematical science, but the comprehension is only in this, that an intellectual agency constructs the particular diagram, and a process of intuition attains the conclusion which, in that class, is universal demonstration. Humanity comprehends itself as mathematician in its capacity for pure construction and intuition that embraces universals.

And now, this whole law of mathematical comprehension is manifestly nothing other than that of free personality in humanity. An interest of reason for mathematical truth is

adequate spring for all mathematical construction and completing of the process of intuition, without any interference from any want in a sensory, and even against, and above, and in opposition to all such wants. The mathematician may regard wholly the ends of sense, and make his science wholly subservient to the agreeable in human wants; but he is then a servant to his sentient nature, and is working for wages. He may have an ethical claim, which involves the worthiness of his moral character; and his mathematical study will then be loyalty to the claims of duty. But he may also have only the end of mathematical truth, and his whole action be prompted and directed, purely in the interest of reason, for sciencé; and in such case, the spring though not an imperative is manifestly also not appetitive. It is a love of mathematical truth, and prompts to action in mathematical demonstration solely for the truth's sake. It is of the same class as in art, though a more serious and grave employment than in the reason's play with the beautiful. There is not the servile drudgery as in working for the wages of sense, though the activity does not rise to the dignity and holiness of an ethical imperative in its own right. It gives freedom from the necessity of nature. It has the spring of the serene interest in the play-impulse, and can take an alternative to all the ends of a sentient nature, and in its own freedom originate its pure diagrams from itself, and go through the processes of its intuitions in the rational love to science as the end of its demonstrations; and in this freedom of the rational is found the only compass by which to determine to each person, and to all humanity, the comprehending of its mathematical science. The diagram must be in some diversity of the pure space and time, but it is wholly

indifferent what diversity in the pure space and time; it may be in the one whole of space and time with nature, or in any mirrored space, or in any purely subjective space in the primitive intuition; but in all cases the person's own free constructions and intuitions will be comprehensive of all his mathematics. He neither measures nor copies nature as his pattern, but makes his own perfect lines and angles and circles, and asks no want in the sense to condition his action and hire or drive him to his work; but he freely engages in it, in the cheerfulness of its own interest.

3. *Philosophical Facts.*—The animal may be philosopher to this extent, that in the experience of antecedent and consequent in the flowing events of time there may be apprehended a successive connection and orderly ongoing of nature. A generalization of this experience may give the rule for anticipating what is coming, and the dictate to shape the conduct accordingly, in proportion to the number of facts which may be gathered within the induction. But to whatever extent of sagacity such a force might reach, it would be bound in nature and subjected utterly to the conditions of a necessitated experience. Pure philosophy reaches much higher than this, and determines the physical forces which must condition all sequences, and bind nature together in one universe and one orderly and already conditioned method of development. It apprehends nature not merely as from experience that so it is, but from the higher point of its *a priori* conditions that so it must be. Nature is apprehended in its physical laws; and it is thus seen that these condition each event in its own place in the flowing sequences, and fix it to both its place in space and its period in time, and that they thereby determine a whole of space

and of time, and not mere appearance in coming and departing phenomena each in its separate place and period. It takes force, as in any possible substances and causes, and determines what is truth in reference to any possible nature of things. All possible nature must be determinable in its place in a whole of space, and in its period in a whole of time; and in order to this the phenomenal qualities and events must stand in a permanent substance, come out of a perduring source, and connect themselves through successive causes and concomitant reciprocal influences. This is not only what a particularly existing nature is, but what all possible nature, as determinable in space and time, must be. A pure philosophy is thus as comprehensive as pure mathematics. The mathematician comprehends in one intuition, all that may in any way have place and period; the philosopher comprehends in one discursion, all that may in any way have determinable place and period in a whole of space and of time. All sensation, that is to be phenomenon in place and period, must be definitely conjoined; and all phenomenon, that is to be nature in a whole of space and time, must be connected in substances and causes. Humanity has thus the comprehension of nature in a philosophy, as truly as the comprehension of forms in a mathematical science. We have a universal truth of physical principles, as completely as a universal truth of mathematical demonstrations. We know what physical force is, as comprehensively as we know what mathematical form is; viz., that what is demonstrated in each, to be true in the particular, is therein a demonstrated truth for the universal; so that we may as conclusively affirm—like causes must universally produce like effects, and that action and reaction must universally be equal; as that any

three points must be universally in the same plane, or that the three angles of any triangle must universally be together equal to two right angles. Humanity as philosopher concludes with equal necessity and universality that humanity as mathematician does.

And, here, precisely the same principles apply, as above in the case of mathematical comprehensiveness. There is the serene interest of the play-impulse, as spring in philosophy, as really as in mathematical science. The philosopher may be slave to sense, and work for pay ; or loyal subject to an ethical sovereign, and act from duty ; but, he may also from pure love of philosophical truth push on his investigation, and live, and act indifferent to all the ends of sense, and solely in the serene interest of philosophizing freely for the science's sake. And here, it is only in the capacity to rise into this region of the free personality, that humanity is competent to comprehend its own philosophy. Just so far as it attains the conception of physical forces, and makes its discursions from phenomenon to phenomenon through them, as the substances and causes which connect all together, it has a demonstrated natural philosophy ; and only so far as this reaches, can it conclude in any judgments beyond its own experience. Each man builds his own philosophy, by his own notional conceptions of the substances and causes he uses for connecting events ; and we can comprehend each man's philosophy, or each man can comprehend his own philosophy, or any comprehension can be made of the philosophy of humanity generally, only as the free personality, in every case, is made the compass for originating and consummating the entire connections of the philosophical system. If he only takes nature, as experience gives it to him ;

he has it just as the animal has it, and is simply an empiric: if he has his own conception of substances and causes as primitive forces, and makes his own discursions through these to his conclusions in a systematic judgment; then has he a philosophy which is his own as belonging to the universal reason, and is comprehended only as his in these free conceptions, and discursions of his own rational being. All philosophy is mere particular *fact* and not universal *truth*, except in the free personality.

4. *Psychological Facts*.—In our animal sentient nature, we may have a psychology which reaches over the whole field of our conscious experience. The phenomena of the internal sense may be singly apprehended, and even a broad induction of such remembered experiences may be made and generalized and classified, by an understanding judging only by sense. But if all experience could be thus generalized, it would simply give us a psychology as a fact, and capacitate us to affirm that so experience in consciousness is; but we could not thus attain any *à priori* conditions for these mental facts, and determine that so universally human consciousness must be. We should have no universal truth in the operations of mind, and thus no rational psychological science.

But, humanity is competent to reach an *à priori* field, quite above and conditional for all consciousness. The pure diversity in space and time can be taken in the reason, and the whole operation of conjunction in all possible definite form be determined. And also the conditional space-filling and time-abiding force, as substance and cause, can be taken in the reason, and all possible operation of connecting events in a nature of things be determined. And once more, the

ideal of the absolute may be attained in the reason, and all possible operation of comprehending nature thereby determined. The entire field of intellectual action is thus brought within its *à priori* conditions, and we have a psychology, not from experience merely, but rationally demonstrated and determining how experience itself is possible. Each man has thus his psychology so far forth, and only so far forth, as he has attained the primitive elements of these intellectual operations of conjunction, connection, and comprehension, and determined their ideal possibility; and humanity in general comprehends just so much of psychological science, as has been *à priori* determined in these operations conditional for all intellectual cognition. All possible intellectual apprehension lies before humanity, and by so much as human investigation has already reached, has humanity acquired a true science of mind.

We have, therefore, the same law for the facts of comprehension in psychological science, that we have before found for comprehension in philosophy, mathematics, and æsthetics. Only in the free personality, above and quite independent of a sentient nature, do we originate and consummate all our psychological demonstrations. We find humanity to have a comprehension of its psychology only as it may move in rational freedom.

5. *Ethical Facts*.—In all the foregoing facts of a comprehending reason in humanity, we have been wholly confined to that region where the physical and rational spheres intersect each other, and have found the free personality only in the rational as it could make its spring in its own interest, and thus always originate action alternative to the gratifications of sentient nature; and yet never rising to the

purely spiritual, as wholly independent of a possible or ideal nature. *Æsthetic* personality stands the lowest in this complex region ; above the animal, inasmuch as it may contemplate beauty and create in the productive imagination its own world of living forms, without any aids or promptings of sense, and solely from its love of the beautiful ; but still below the purely spiritual, inasmuch as all the pure ideals of art must take some form, and be conditioned within a possible nature of things. Scientific personality, whether in mathematics, philosophy, or psychology, stands higher but still within this complex region ; above the animal, for the same reason, that it may pursue science for its own sake, and make for itself its own subjective system, which shall have strict universality beyond all the generalizations of experience ; but yet below the purely spiritual, inasmuch as all its scientific systems, even in their ideal creations, must be conditioned in possible nature. The world of taste, though of the free originations of the productive reason, must still have its artistic product put objective in nature, and holding some matter within its living forms of beauty ; and the world of scientific truth, though a free origination of reason like art, and higher than art in that it is not conditioned to embrace any content of matter, must still be restricted to what is possible to be given in nature, and conditioned within the determinations of space and time ; and thus both beauty and truth, art and science, while possible to be given only in the comprehension of a free personality, are yet incompetent to rise into the region of the purely spiritual divorced from all the conditions of a possible nature, and attain to the dignity of an ethical imperative, which does not merely cheer in its own interest but obliges in its own

right. There is a comprehension of nature as below humanity, but not a comprehension of humanity itself as both natural and supernatural; sense and spirit. For this purpose it is necessary that we be able to rise above the intersection of the two spheres and stand wholly and purely within the spiritual. \ In the play-impulse we rise above the animal; we attain the interests by which we may cultivate, refine, and enlighten savage humanity, and thus effectually lift man above his brutal instincts and appetites, and this is surely a great achievement and most auspicious beginning; but we do not thus introduce him to the claims of an ethical life, and the communings of a spiritual society. Neither the beauty of art, nor the truth of science, while they elevate him above the physical and the animal, can possibly place man among the moral and the immortal. \;

But humanity has the facts of an ethical comprehension, and which give to it that which is its own as solely the obligated and the responsible; and as higher and more important than any yet considered, it is now especially incumbent that we attain a clear view of these facts of an ethical comprehension, and see whether they all come ultimately within the colligation of the same law of a free personality; the freedom only so much the higher, as the personality by which we encompass the facts is the more exalted. We here need, not merely the æsthetic and the scientific free-man, and thus the artist and philosopher as person; but the ethic freeman, and thus the sage in his wisdom and virtue. We do not here reach to the sanctions of religion, natural or revealed, because we are not now in the recognition of the absolute, but only the finite personality; we have a morality in the right of humanity, and we here seek for the

law of its comprehension. In order to this our hypothesis demands in the facts a spiritual or ethical personality; and we need under this last division, this important subdivision in our induction—*First*, the facts which indicate our recognition of an ethical personality in humanity; and, *Secondly*, the facts which evince that we make this ethical free personality the perpetual and only law of all ethical comprehension.

First, the facts, which indicate the universal recognition of an ethical personality in humanity. By this is meant the recognition that the human may always figure himself not merely as material or animal, nor yet merely as artistic or scientific, but altogether as spiritual in an ethical and immortal being; and thus possessing an end which is imperative in its own right, and for its own sake. This is seldom explicable even to him who yet manifestly recognizes such ethical personality. Very often from the delusive false play of an understanding which may connect and never comprehend, the very conception of such an ethical personality is affirmed to be an impossibility, inasmuch as it involves an absurdity. And so indeed it would be, were the connections in nature's conditioned substances and causes our only method of judging, inasmuch as all judgments of existence must thus be discursive and never comprehensive; yet we now undertake to adduce some of many facts, which indicate the universal recognition of such ethical personality in humanity, though quite inexplicable or even speculatively denied by him, who, notwithstanding, does most unequivocally evince his full recognition of it.

(1.) *An ethical end controlling by an imperative all other ends.*—A sentient nature with its animal appetite must

have one particular course in which its highest gratifications in the aggregate will be attainable. This may be found from a generalization of experience in a calculation of consequences, or be given as a revelation from some higher source of knowledge. In whatever way attained it is a dictate of *prudence*, resting upon the consideration of the greatest happiness. Moreover, a sentient nature in the midst of other sentient beings, must have one particular course for its action in which it will render itself the most useful to all others, and so to every being in that community of sentient natures, there is the course for each to be the most useful for all. And whether such a line of action be attained by an accurate calculation of general consequences or by revelation from a higher experience, its course is the dictate of *benevolence* or *public utility*, and rests upon the greatest happiness of the greatest number. These rules of action are conditioned in the sentient system, and are as truly facts, things made, as the sentient beings themselves. The dictates are *made* in making the sentient beings, and would be *changed* in any change in the constitutional nature of these beings. The sentient being and his system of fellow beings, existing as they do, must of necessity enforce such *dicta*.

When, then, we put the inquiry—Why be prudent? the answer at once comes from the sentient craving of nature; there is thus the higher wages, in the greater sum total in individual happiness. Better make the present or the partial sacrifice, for the future and the greater gratification. And why be benevolent? The answer of a sentient nature must be, either that the result of obeying the dictate of benevolence will be a fuller stream of gratification, poured

back from the many upon the one ; or that it finds within itself an appetitive want, which is most gratified in seeing others happy. The first is merely prudence in the form of beneficence, lending to get more in return ; the last is mere kindness, the gratification of a sympathy which craves like any other appetite ; and both are conditioned in the necessities of a nature of things, on all sides. Nature wholly works in and controls the sentient subject ; and nature is also the lawgiver, the judge, and the executioner. It is in vain to rise above nature by any attempt and question any part of the procedure ; either the obedience or disobedience of the subject, for a conditioned nature controlled him ; or, the legislative, judicial, and executive departments of the government, for these are all conditioned in nature. The animal is in his action conditioned to the craving of his sentient nature, whether of any particular appetite or the highest gratification on the whole, and all such craving is necessitated by the antecedent conditions, and then the ponderous iron wheel as executive in nature rolls on, crushing the imprudent and the unkind. The omnipotence of nature is all that can be regarded ; whether in the good or bad fortune of the sentient being ; the dictates given ; or, the consequences accruing to each and to the whole. Humanity, in its sentient nature, can never rise to any end other than the appetitive, and that is throughout necessitated in the conditions of nature.

But, as æsthetic or scientific, humanity has ends which may entirely control those of sentient nature. Merely as artist, man may so recognize the baseness of sacrificing taste to appetite, and selling beauty for bread ; that he shall thereby hold in check any craving of sense, and refuse to

prostitute his genius to any mercenary consideration. And merely as philosopher, also, he may so regard scientific truth, that he shall hold all the ends of animal nature wholly subservient to its attainment; and be so in love with it, that no consideration of sensual gratification or sacrifice can draw him from it. || Without regard to the ethical claim for veracity, and solely from the steadfast inner adhesion to scientific truth, Gallileo departs from the bigots who had forced him to recant his doctrine of the earth's revolution, still repeating to himself "but it does turn." || There may very well be so lofty a deference to the interest of reason, that the man shall be a willing martyr to the beauty of art, or to the truths of science. This is not the sacrificing of one gratified want for a greater; it is a sacrifice of all gratified wants, in order not to debase the ends of reason to sense, and sell its beauty at a price, and barter its truth for a hireling's wages. Few, perhaps, may possess so deep and absorbing an æsthetic or scientific interest; but to every thinking mind, it is quite manifest how humanity may be brought up to such an elevation of rational culture, that all of sense shall be made to succumb to the rules of taste, or defer to the truths of science. Here, then, is a field for freedom; and the savage, in whom the sentient completely reigns, may be brought up into it from his state of brutality, and attain to a personality in liberty. But his spring, alternative to the appetites of nature, will be simply the love of the beautiful and the true restraining the gratification of the agreeable, while he still may know nothing of the ethical in its imperatives and responsibilities; and though elevated quite out from the animal, he does not thus attain to a moral and immortal existence.

But we now turn to a fact which every mind may recognize, viz., an end in moral character, or worthiness in the ethical personality, which wholly subordinates all other ends of the sentient or the human being, and makes every want of the animal nature and every interest in art and science amenable to its behests. It over-rules both prudence and benevolence, and commands by a higher imperative than for the sake of happiness or of kindness, even from personal worthiness, and thus that the action ought to be prudent and kind. And this higher end has also rightful sway over the whole world of art and science; and is imperative that neither beauty in taste, nor truth in philosophy, shall be pursued, otherwise than in full accordance with the worthiness of the ethical personality. As "the life is more than meat," so is the integrity of moral character more than appetite or art or science. If any want whatever, or any happiness in any degree or duration, or any interest in beauty or truth, induce the will into its service as end, so that it shall cease to hold the highest worthiness of the ethical personality as supreme end; then is the moral character degraded and debased; the spiritual birthright is sold for a "mess of pottage;" and the soul is forced to blush in conscious shame, in the inner witnessing of its own vileness. "The spirit of a man will sustain his infirmity, but a wounded spirit who can bear?" Whoso thus saveth his animal life shall lose the life of his spirit. This every where recognized fact, of an imperative to curb every appetite, and all æsthetic and scientific interest, by the higher end of an ethical worthiness; and to have no happiness nor beauty nor science in the subversion of this ultimate end and right, evinces the universal recognition of an ethical personality in humanity.

(2.) *Ethical affections above all others.*—That which ministers to the gratification of sentient want is agreeable, and that which offends the appetite is disagreeable. Hence we often term one affection or love, and the other hatred. In the various ways in which the agreeable and the disagreeable apply to our sentient natures, there may be the emotions of joy or sorrow, gladness or grief, hope or fear, etc., and in this manner may arise all the constitutional affections which are found in a sentient nature. They are wholly natural affections, inasmuch as they are wholly necessitated in the conditions of the sensory, and are thus wholly bound in a nature of things. Were there nothing in humanity but the wants of a sentient nature, all our affections must be strictly nature, and stand in their conditioned connections like all the successions in the physical world. And, moreover, we may apply the beautiful and the true to the play-impulse, and awaken the cheerful interest which gives the rational pleasures of taste and science and we shall have those affections in humanity in which the artist and the philosopher may participate; but though these affections are awakened in freedom, yet are they all circumscribed within nature and conditioned to space and time, inasmuch as these pure objects which awaken the affections, though destitute of matter, must yet have form, and though above the sentient must yet abide in the region of the human. To possess such affections, in the full perfection of art and science, capacitates for no participation in the ethical affections of the purely spiritual and immortal.

But we may bring in here, from the experience of humanity, an array of facts which evince the full recognition of affections that can come from no such parentage. They

evinced their pedigree from an ethical personality, and in their own right take precedence over all other affections. They are no result of any application of the agreeable to a sentient want, nor of the beautiful to an æsthetic or of the true to a scientific interest.

When an occasion for a high degree of sentient gratification presents itself, but with the clear conviction that indulgence will be followed by a more than counterbalancing sentient suffering, then the gratification is forborne from the dictate of prudence. When this is all that restrains, the only possible affection induced in the experience is the gladness that so much sentient evil has been excluded, blended with a certain measure of self-esteem for the prudential foresight. But when, in externally similar circumstances, such affections as the following are experienced, viz., a conscious self-approbation in an act of self-denial and a complacency in the review of the act as worthy of my spiritual and immortal being, and that I must have forfeited my self-respect and found occasion to hide my face in shame at my dejection, if I had done otherwise, we then surely have something higher than any dictate of prudence on the ground, I at greatest happiness. It is not the price of happier or ungreater gratification, but the intrinsic dignity and more than my ethical personality; and the affection is wholly forthrightness, not of gladness in so *much* shame in including sentient suffering. And moreover, why have made period of intense suffering I endure it, and refuse imprudence from it in the prudential conviction that *we* know the difficulty would be otherwise unavoidably incurred; the ethical debase-
which this can induce is the patience, which consciousness that in the wretchedness to which nature dooms the flesh. I can

that it is better so than to change; I could only throw off this burden to take a greater; I could not make myself more happy by escaping, I am the less miserable by enduring. But if now such considerations and affections as the following come up; it is manly to endure; it is an honor to humanity, and an ennobling of character to stand firmly amid the severity of these sufferings; then is it necessary to recognize a free personality altogether above any appetitive want. All the considerations of happiness in greater gratification or less suffering are forever banished as mean and mercenary, and the sole question is the end of my own worthiness—what in the right of the spiritual in my humanity is my duty?—and whether for a day, for life, or forever, I shall, as I ought, stand by my duty to the rights of my ethical personality, and bide the blow that any force in conditioned nature can bring upon me.

And so, also, when from the dictate of kindness I have made great sacrifices to increase the happiness and relieve the misery of man, and in which has also been included the exercise of prudence in that thus my own greatest happiness men rejected, I shall doubtless have a refined gratification of operative want in witnessing the fruits of my kindness completing the pledges of their grateful return, and while desiring the happiness I have imparted I also enjoy with it and cherish the happiness that flows back upon me, and

A higher truth even in my constitutional nature that "it is of similar taste to give than to receive." But if, on the same truths, I have contemplated humanity as spiritual and sentient wants, sentient, and have had the worthiness and not such pure interest of my race in view; and if my labor and conceptions of eternal life to win them to virtue, and that the

rights and claims of the spiritual and not the appetitive wants of the sentient have been my end, and that I can hold on my course amid discouragements, and hatred, and persecution; and, when at all successful, if I rejoice for virtue's sake in their recovered dignity, but when without success, and only from the imperative of my personality, if I can still persevere in my duty, and find my reward solely in the end of my worthiness without one sentient want gratified; then in all this, I recognize a spring to action which can not lie in the dictates of prudence and benevolence, and can never stand in a generalized self-love nor a kind sensibility, but must originate solely in the inner witnessing of the spirit, as imperative for its own worthiness' sake.

If an emotion of *reverence* ever arises, it has not been in the presence of any thing which nature, material or sentient, can set forth. I may fear, wonder, and be terrified before the working forces in nature, but I can never revere, except as I find a personality, which in his own right can h^{ot} every appetite and affection that nature can awaken su^{gra} to his own behest, and will not go at their bidding th^{ome} nature do its worst. So if I am affected in *remors*nd of once distinguish it from regret for some imprudenc^{less} in kindness, and feel that it bespeaks something m^{orth} of happiness lost, even ethical dignity debased and w^{at} that of of moral character degraded. I may experience^{everly} ex-my sentient being, if some conditions in natureⁿ in some me to appear ludicrous; or, when through men^{se} to escape I have exposed myself to ridicule; but I well^{ater} suffering ference between all such shame, and that^y only affection ment, which blushes even before its own comforts itself it has been guilty of subjecting the spirit, me by reflecting

grieve under nature's bereaving calamities, and weep in sorrow that I have been imprudent; but I shall distinguish all this from the tears of contrition and penitential sorrow that duty has been neglected, and my virtuous character tarnished. I know in all cases, the mighty difference between wounded sensibility, and violated authority; a want made empty, and a right wronged. And in all such distinctions of affection, every man recognizes the existence of an ethical personality, which alone can give to such experiences in humanity any exposition, and to such distinctions of affection any consistency.

(8.) *Reciprocal complacency in communion.*—Different animals herd together, induced by kindred appetites. A constitutional want brings man into society, and the cravings of nature would be sufficient force for collecting human beings into communities. Congenial temperament, the instincts of consanguinity, common pursuits and reciprocal advantages bring different persons together and hold them in companionship, and often with much mutual satisfaction. Very much of what is termed friendship and love among men reposes upon such conditions in nature. But all this, operating in its fullest measure, can produce no reciprocal complacency. Here are the strongest bonds which the sensibility may give to social communion; and still all is appetitive and conditioned by the cravings of nature.

A higher communion may be cherished in the cultivation of similiar tastes, and the study and contemplation of the same truths. Art and science, insomuch as they rise above sentient wants, give purer interests; and a communion of such pure interest in the same living forms of beauty and conceptions of eternal truth, will constitute rational attach-

ment far superior to any mutual gratifications of animal want. And yet, such a community would be utterly destitute of mutual ethical complacency. No one would have the inner witness of his worth, and the imperatives which this imposed, nor could any thing be known of self-approbation, or the approbation of others. All communion in spiritual personality would be impracticable, for they have not as yet waked to the consciousness of such an existence.

But wholly above all these attachments, we have examples of a communion in common rights and mutual claims and the fulfillment of reciprocal imperatives, and thus attachments which strike their root in virtue, and repose upon confidence in moral worth and integrity. All men may witness acts of virtue, and approve; but the virtuous will be conscious of more than approbation—there will be a complacency and sweet communion of spirit in the whole transaction. Every mind reveres the steadfast good will which holds firm to righteousness, and bears up in duty against all inducement and danger; but a vicious mind, though compelled to respect, will not be pleased with such stern and inflexible consistency of character. The example throws back upon him the consciousness of his own debasement, and awakens self-condemnation, and he will never hold communion with the rigidly virtuous for virtue's sake. Such moral repellency, between the virtuous and the vicious, evinces in both an ethical personality; on one side, a will enslaved to the gratification of sense, and on the other, a will free in its loyalty to right, but in both a character which is estimated by each, and between which there can be no reciprocal complacency.

The virtuous man on the other hand, knows that his

virtue lies in the valor with which he beats down all the contending appetites of the sense, and subjects every end to the ultimate claim of his own true dignity. In the society of the virtuous, there is a reverential respect of each for all; and, while each possesses an inward self-approbation, there is also mutual complacency which can be found in nothing but the possession of a virtuous ethical character and the recognition of the same character in others. No other than a free ethical person can love the virtuous for his worthiness' sake; and none but the ethically good, in their free personality can be loved by the virtuous. I may value as of such a *price*, that which I may use for my happiness or interest; but there is no attaining to the complacency of personal communion in this, for the means I use is in that very use made thing and not person. A good, as a means to an end, is wholly a different good in kind from that which, as ultimate end, must be the supreme good. If another person is good only as means to end; if the absolute Deity is so held as good, only that he makes a heaven of happiness for me, then to me he is at once made a thing and has a price, and not a *dignity* which is above and beyond all bartering. When the reciprocity is only that of happiness, and men regard each other only as each is subservient to the others' happiness; or man regards God as only the maker and dispenser of happiness, and God regards His creatures only as they minister to Him in happiness; then is it impossible that the ethical love of complacency should subsist between them. A want and not a worthiness is thus put as end, and that each were reciprocally *useful* to each, as joint stock co-partners in happiness to be distributed among them all, and valued by each only in proportion to his own share,

would be the only point of congeniality between them, and each would be to others, a thing to be used ; a means to be valued for what it could get ; and not a person, who had rights in his own intrinsic worthiness, which must be ethically respected by all. Reciprocal complacency requires the communion of free personality—like with like ethically—their rights mutually respected, and their imperatives individually fulfilled ; not each a means to the others' happiness, but each complacent in the others' worthiness.

That we have such facts of complacent communion, and that every man is conscious of a capacity for an imperative to such communion, is the clear recognition of his own and others' free ethical personality.

(4.) *Capacity to resist all the conditions of nature.* The cravings of a sensory are wholly conditioned in nature. The cravings must be as nature develops, and there is no alternative to what nature imposes. The whole sentient life, constitutional temperament, physiological propensity and native susceptibility, is bound in cause and effect, and were there nothing but desire for happiness, there would be no alternative to nature's conditions in the experience. A dictate of prudence, settled by the most comprehensive generalization, is as truly appetitive as any single want in its sudden excitement. The conditions of nature will determine that the prudent judgment shall or shall not be concluded, and gratification is sought accordingly. All action from a want is as completely one with nature as the flowing and ebbing of the tides or the revolving of the planets. Sentient life must ever more flow in the current of nature's conditions, and can possibly find or admit within it no spring to action as alternative to nature.

When, therefore, we recognize any facts which evince a capacity to turn and stem the stream of nature's conditioned sequences, it is quite manifest that in them we recognize an ethical personality in liberty. It is no more manifest, when the tempest-tossed ship rides out the storm and maintains her steady and safe position against the elements, that her anchor holds on to that which stands beyond the contending billows; than that when the good will holds firm against all the cravings of appetite, it has its end above all that a sensory may contain. To play off one appetite against another, to stifle one want in the stronger craving of another, to hold each clamorous passion in subjection by the prudential consideration of the greatest gratification of all, is still to be only in nature. It is merely using one part of nature as a defense against another part, or the whole of nature against any particular interference. But, when all of sentient nature is setting in one direction, and an inner witness of what is due to the worthiness of an ethical character puts its imperative prohibition to the attainment of any such end; then, is the ethical end wholly out from the sentient end, and the ethical right gives a spring to control the sentient want, and an alternative is afforded to nature's conditions by putting a sovereignty over nature, and giving to sentient want a master that in his own right may subject and control it as a whole and forever. Should it be said, after all the fair appearance there may still be some secret want or prudential consideration, that is controlling the whole sentient nature beside, as an o'ermastering craving; we should then at once appeal to any man's own consciousness of either what *is*, or of what *ought* to be, in his own case; and such

facts of consciousness are at once the recognition of the ethical personality.

Thus, you have yourself been thrown into circumstances, where all the inclinations and tendencies of sentient nature were in one direction, and appetite and example and opportunity were all in combined impulse towards gratification. But there sprang up the irrepressible witnessing within—I *ought* to resist, and turn back this whole tide of appetitive desire, and stand firmly uncompliant. And here the question is—Whence this *ought*? Surely not from any portion of the sentient nature; not from any æsthetic or scientific interest; it is the claim of some ethical sovereignty, as imperative over appetite and taste and philosophy, and holds the agreeable, the beautiful and the true in science, subordinate to the good and the right in morals. Nothing can possibly awaken this conviction of obligation but the inner witnessing of a right, and never the mere craving of a want. All of appetitive want may thus be combined, and yet the counter conviction may come that *I ought*, and therefore that *I am able* even when I do not, to resist every impulse of the sense, and stand unswayed by all the promptings of constitutional desire. The consideration of time, how long such subjection of gratification shall be maintained, has no possible relevancy; the end of ethical worthiness is supreme for all possible period. Nor, has the consideration of the degree of trial and sacrifice any pertinence; the highest possible susceptibility of a sentient nature is still to succumb to the worth of ethical character. All that a sensory in its keenest craving and most passionate want can sacrifice may be demanded in the right and for the rational end of the spiritual excellency; and thus an imperative may

fix an obligation to resist nature, great as the trial may be and long as it may endure. The firm will, in its ethical integrity, is thus capacity for standing against nature in all her force. Let her do her utmost, and I may still be firm and unyielding; let me be crushed beneath her iron conditions through all my sentient being, and I may still say, in obedience to the end of my own worthiness, that I will go down to death in the integrity and loyalty of my good will and pure conscience.

Even in the degradation of the spirit to the lowest depravity, and the submerging of all imperative beneath the raging tide of passionate gratification, the man is still compelled to the conviction, that he has put himself under the domination of nature in the flesh by his own consent, and that this degradation is not misfortune but guilt, and that he ought to break the chain of his sensuality at once, and come out from his foul and noisome prison-house, and stand up in manly valor and virtue, with the free and the good. He is conscious that while his appetites are of nature, there is a nobler part of his being which is not bound in the conditions of nature. He can take hold of what is beyond all of nature's conditions, and stand thereby in steadfast resistance to every thing which would degrade and enslave him, and for the sake of his dignity trample on all of happiness which collides with duty. This the virtuous man knows as achieved in his righteous integrity; this the vicious man knows as claimed in his conscious responsibility; and in this is the full recognition of a free ethical personality, whose right is above all the ends which any conditions in nature may propose.

Here are now sufficient facts for the evincing of a uni-

versal recognition of an ethical personality in humanity, and this prepares us for the remaining consideration in the induction of ethical facts, viz. :

Secondly.—That we make this ethical personality the only compass, by which to comprehend all the facts that are moral in humanity. The successive events in the flowing stream of nature around us, as the seasons, the weather, the alternations of day and night, the growth and decay of vegetation, etc., how much soever they may affect us favorably or unfavorably, we never call ours as if we had any responsibility in originating them. We always refer them to an agency quite above and beyond all that is human. The changing events in the physical world affect mankind, but are never brought within the compass of humanity, as if they belonged to it, or were at all comprehended in it.

So also with the changing wants and craving appetites of our sensitive nature. We may call these ours inasmuch as they come within the unity of self-consciousness, and take place on the field of our experience; yet we never appropriate them to our personality and consider them as comprehended within our agency. They are the affections which nature within and around us works upon us, in which we are passive, and not that we in any sense originate them. That I am cold, or hungry, or sleepy, and desire to gratify or relieve these craving wants is nature's work on the field of my sensibility, and not my work, as originating in my purpose, and carried out according to my intention. I hold myself to be wholly irresponsible therefor, except as in some act of liberty, I excite or control the executive acts which gratify them. The promptings of self-love, though generalized to the broadest dictates of prudence or kind-

ness, are wholly pathological and bound in the necessity of nature's conditions. The brute and the man, as animal solely, move in the same lines of conditioned appetite, and take or leave the objects of gratification according to the craving want, or as controlled by the teachings of experience. We never comprehend such facts in the compass of any responsible personality.

Moreover, we create our own forms of beauty, or construct our own pure diagrams in geometry, or connect our primitive conceptions in a philosophical system, and we may call these productions of art and science ours, in the acceptance that they are the works of our rational genius. We comprehend them within the compass of an æsthetic or scientific personality in humanity; but inasmuch as all such products are not within the region of spiritual rights and behests, we shall never here recognize the claims and imperatives of moral obligation and responsibility, nor attempt to comprehend the beauty of art nor the truth of science in an ethical personality.

But, there are facts, which evince that man is in himself an ethical whole; a moral world; self-separated from all other things and persons. As each man has his own, so humanity in the aggregate becomes a comprehensive total as human responsibility and obligation. Here is excluded all the facts of a merely sentient existence, and all of taste and science, inasmuch as none of these are bound up in the imperatives which originate in what is due to the spiritual and immortal in humanity.

Every man's virtues and vices are his own, in a meaning wholly other than that his appetites are his own; and wholly other than that his productions in the fine arts, or his

attainments in science, are his own. They are his, in that they are wholly comprehended in himself; and their origination, and final intent are compassed in his ethical personality. That voluptuous indulgence, which has not merely brought pain and loss from its imprudence, but far more has induced conscious debasement and remorse, must the guilty man say, is all my own in its entire moral and responsible being. That selfish counsel given to another; that deceptive and ensnaring influence; that tempting solicitation; that dishonest intention and matured plan of wrong-doing; that perverse and perpetuated immoral habit; that malicious slander, or profane speech, or licentious publication; that unholy deed, and that wicked lie; all are in my own consciousness confined to my personality; and it were quite vain for me to attempt to shrink from a full and final account.

So also, on the other hand, that firm purpose and decided adherence to principle; that disregard of all allurements and threatening in the line of duty; that good counsel on virtue's side; that cheerful sacrifice of pleasure for the right; all have had their origin in my personality; and are deeds, for which none but myself can be conscious of a complacent self-approbation. They have dignified and adorned my character, and in them no other personality can participate. These deeds of vice or of virtue have gone out and mingled with the facts of nature, and become linked into the conditioned series of physical causes and effects, and spread abroad their baneful or beneficial influences; but they did not come of nature, and can not be transferred from myself to any of the necessities in nature. They must forever stand to my account, and come back to me for their origin

and final design. And thus with every man ; he separates all that is his from all that is nature's or another person's, and thus comprehends his own in himself, and as proper person with his own deeds stands self-isolated from all else ; and neither nature, nor his fellows, can be made to share in his responsibilities. What nature has wrought within him or thrown upon him and what another person as mentor or tempter has done, he puts entirely distinct from his own agency, and thus takes his own, and stands forever and completely absolved from all that is not his own.

In this, and in this only, is the comprehension of human morality. Every man owns as his, and at his responsibility, that which has origin and direction from his ethical personality ; and he can be made to own as his no other events beside. His personality in liberty is the only compass by which to include his responsibility ; and the morality of the human race can only be comprehended in that which is ethical personality as habitant in humanity. Sentient craving is nothing but conditioned nature working in man ; beauty and truth have an interest above appetite, but can not give imperatives nor awaken responsibilities ; the end of his own worthiness and dignity, as moral character, gives the inward witness by which he knows himself and his own.

And now, in conclusion we say, that all the facts under all the foregoing heads are fully held in colligation by this invariable law of comprehension. On the whole field of humanity, we never comprehend any portion of its facts in their origination and consummation, except as we bring them completely within the compass of a free personality. Whatever in human experience is conditioned in material nature, or in sentient nature, we never attempt to compre-

hend, except as we ascend to the comprehension of nature itself. It is found in human experience, only as this is subjected to necessity; and hence its comprehension if attained at all, must be brought within the compass of a personality, which is sovereign author of humanity itself. In this section of comprehended facts in *human experience*, we have our invariable hypothetical law; that we comprehend nothing, which we may not bring within the compass of a personality in liberty. We have yet to carry out the same hypothesis over the facts in a comprehension of nature itself, and this we will effect in the next section.

SECTION II.

THE FACTS OF A COMPREHENDING REASON WHICH COME
WITHIN THE COMPASS OF AN ABSOLUTE PERSONALITY.

In the previous section we determined the fact of a universal recognition of a free personality in humanity, and that all comprehension of the products of humanity was wholly by the compass of this free personality. We rise from nature, and find that which is not conditioned in nature, and comprehend this in an author and designer. The artist is rational and free person, in that the love of the beautiful is spring for an alternative agency against all the appetitive wants of sentient nature, and thereby all the productions of an artistic taste are comprehended in the compass of the æsthetic personality in humanity. The philosopher is rational and free person, in that the love of the true is spring for an alternative agency against all craving want, and

thereby all the attainments in science are comprehended in the compass of the philosophic personality in humanity. The moral agent is rational and free person, in that an ethical imperative is spring for an alternative action to all sentient want and all æsthetic and scientific interest, and thereby all moral character and responsibility are comprehended in the compass of the ethical personality in humanity. A comprehending reason thus actually comprehends all the products of humanity, æsthetic, scientific and moral, as facts in human experience, solely by the compass of a recognized free personality.

It is much to have thus found that the facts of comprehension, so far as they lie among the products of humanity, are all in complete and perpetual colligation by this law of a personality in liberty. We never comprehend within the products of humanity any events, which we do not at the same time recognize as within the compass of a free human personality. Whatever is bound in the conditions of nature though appearing on the ground of human experience and coming within the field of human consciousness, is at once attributed to nature and not comprehended as within that world of events which humanity originates, and for which it must stand accountable.

But, therefore, we have the facts of comprehension only amid the products of humanity. Each person is compass by which we comprehend all that is his; and all persons constitute all of humanity, and in the aggregate compass by which we comprehend all the creations of man; and if any facts should disclose themselves as the product of angelic agency, such events would in the same manner be comprehended within the compass of angelic personality. In this

way, however, we could attain to but a very partial induction of the facts of a comprehending agency. Very few of the events in nature can be considered as the product of either human or angelic personalities. Take away from the series of conditioned causes and effects in nature all the events which have found their origin in humanity and may be comprehended within the compass of human personalities, and though such subtraction would give abundant manifestation that nature had been much modified and indeed augmented in the stream of her flowing sequences by man yet would that which was taken bear but a very small proportion to that which would still remain. These modifications of material nature would not at all reach to its primitive substantial space-filling force. The essence of nature would be found to be neither increased nor diminished, inasmuch as the products of man's creation are never any distinguishable physical forces, which may fill space with new substances or superinduce upon existing matter new organizations.

We have, therefore, occasion for many facts of a comprehending agency in the origination and consummation of events in nature, which can by no means be brought within the compass of any human personality. Indeed, our grand object is to determine the law of a comprehending reason in reference to nature herself, and we have only dwelt upon the facts of a comprehending reason within the products of humanity, in order to show that as the actual law is here also the same, we might thereby have the more abundant confirmation, that this one hypothesis of a personality in liberty holds all facts of a comprehending agency everywhere within its colligation. We shall make it our object in

this section to show that all comprehension of nature has this one law, the recognized compass of a free personality, as the author and finisher of all that is thus comprehended; and wherever such encompassing personality is recognized, there do we at once comprehend all the events in him. Since the events are of nature, and not the product of any finite personality, it follows that we must take it for our hypothesis that all such comprehension of events must stand within the compass of an absolute personality. We shall, therefore, find it convenient to pursue this order of induction—*First*, to induce such facts as show a universal recognition of an absolute personality above nature; and *Secondly*, to induce such facts of a comprehending reason for nature, as shall evince that all operation of comprehending nature is by the law of this absolute personality. In this last division, inasmuch as we have both a physical and an ethical system as universal, it will be necessary to have this sub-division of facts for the law of comprehension, *first* in the physical, and *secondly* in the ethical universal system.

1. *Facts evincive of a universal recognition of an Absolute Personality.*—There are many facts which show that the human mind readily recognizes a personal author and governor of nature, and it is only from the influence of perverted speculation that such recognition comes to be discarded. Humanity is not Atheistic except as deluded. The conviction that there is a personal God above and Lord of nature, would be perpetual and universal except for the paralogism induced in the antinomy of the connections of the understanding and the comprehension of the reason, of which more notice will soon be taken. This is not the place for an ontological argument demonstrative of the actual

existence of a personal Deity; we seek now only to establish this conclusion, that the human mind readily recognizes such a being, and that the conviction is not discarded except through a process of speculation which may be easily exposed in the very sources of its fallacy.

(1.) *The ready assent to the fact of final causes in Nature.*—The common and most satisfactory basis of Natural Theology is the universal conviction of final causes in nature. The evidences of adaptation to ends are so numerous and so prominent, that no observing mind fails to be impressed with the conviction, that there has been an intelligent design in such adaptations. The argument, accumulative with every fact of adaptation, is at first satisfactory and convincing to every apprehending mind. It is when we begin to speculate upon the process of proof, and examine the conclusiveness of such argumentation, that we lose the force of this first conviction and may pass through all grades of skepticism to a confirmed infidelity. The speculation does not at all weaken the evidence of adaptation to ends in nature, but it obscures the conviction that such facts may be made demonstrative of a personal Deity. When we examine these connected adaptations more closely, we find them all conditioned in their sequences, and the succeeding to be necessitated by the preceding and the on-going of nature a perpetual series of link in link without alternative. The means to an end now future were themselves end to be reached by former means, and how are we to leap in our conclusions, from this linked necessity every way shutting us within its fixed connections to some independent and free personality as an original designer? .

Instead of the phenomenal adaptations connected in their

conditioning causes, we may assume that an intellectual attribute which we call *intent* or *design*, appears as element in this combination; and we may then take that intellectual element as the fact from which to conclude upon an absolute and free maker and designer of all things. But we shall still have the same endless chain of conditioned sequences. There is design, as intellectual element, in the arranged wires of the carding-machine, and this may be deemed sufficient proof for an intelligent designer. But when I see that busy little iron hand, with astonishing precision, bending and cutting the wire and puncturing the leather and exactly inserting the card-teeth, I find here the intellectual element higher up in the development of sequences and conditioning in necessity what is below it. How shall I leap from the conditioned mechanism to the free personality. The man makes the iron hand that makes the card; but that man again is an adaptation as means to such an end, and in his wants and interests and circumstances as much conditioned, it may be, to make card-teeth machines, as such machines are to make cards. In the man then is now found the intellectual element conditioning all that follows. But I need a designer adapting the man to his sequences, as much as in the former case I needed the man adapting the machine to set card-teeth; and then, when I find the designer of the man in his adaptations, I shall find the intellectual element there, and yet shall be no nearer to a demonstration of an origin of all design in a free personality than when I began with this design in the arranged wires of the carding-machine. It is ever design apprehended only in some already conditioned connection, and I can not leap from conditioned result to a free originating personality.

It is thus with every form of argumentation on the basis of final causes. That which seemed so conclusive at first, when speculatively examined fails utterly to reach any conclusion. The regressus is ever with an open backward way, and when pushed, the understanding must perpetually tread back from one conditioned to a higher condition, and never reach its origin in an unconditioned. It is thus that all teleological proof of the existence of a personal Deity must fail of a demonstration, because it is impossible that the process should rest in other than an arbitrary conclusion. The personal designer is surreptitiously assumed because we rationally need him, but not at all because we logically find him. But, when we now know the clear distinction between a connecting understanding and a comprehending reason, we can at once free ourselves from all the delusion and paralogism of such speculation. Reason demands an absolute and can rest in nothing else, for it can possibly comprehend nothing except in this *compass* of a free personality; but an understanding forbids all such origination, and can possibly conclude in connected judgments only through the *medium* of perpetually underlying and interlinking conditions. The very idea of a personality in liberty is an absurdity to the discursive faculty, and to which the conception of a deity can possibly be none other than the notion of a substance filling all space, and in its causality working through all time, and connecting within itself all the conditioned phenomenal changes in nature. The reaching forth of the comprehending reason, and the short-coming of the connecting understanding utterly forbid that we should put the two faculties at work together, or one for the other, and suppose that their results may be brought concentric with

each other in the same sphere. If we would attain to the personal Deity of a comprehending reason, we must not delude ourselves with the folly, that such can be measured in the connections of a discursive understanding. The discursive faculty can not move at all without its media of substance and cause, and when it thus moves it must be from condition to conditioned; how then may it assume to determine any thing about the originating of space-filling substances and time-abiding causes? It is quite as incompetent to *deny* any thing about free personalities as to *prove* any thing. It can not say how substance and cause may begin to be, but as little can it say that they may not begin, and have their origin in a free personality. It is wholly impertinent to this faculty, that it should meddle at all in the questions of final causes and free originations, and ethical personalities. The sense might as well attempt to perceive the essential force which connects the phenomenal universe. Neither is competent to affirm or deny beyond its own legitimate province.

We may at once therefore, utterly disregard all these delusive speculations of a discursive judgment; and if they are found wholly incompetent to comprehend the adaptations in nature, by the compass of a personal Deity, so also are they wholly incompetent to exclude the possibility of such comprehension, and deny the actual being of a personal God of nature. The ontological demonstration may hereafter come in its proper place, but enough is here given to show that the conviction of final causes in nature should not be at all weakened or modified from any speculations which are manifestly so preposterous. And yet, all such recognition of final causes is, in the fact itself, the recognition of a free personality above nature. A final end to be at-

tained in and by nature involves an overruling and a using of nature for some personal intent, and in that mind, the recognition of a personality independent of and absolute over nature. To such a mind "the heavens declare the glory of God and the firmament sheweth forth his power." "The invisible things of him from the creation of the world are clearly seen, being understood by the things that are made, even his eternal power and Godhead."

(2.) *The recognition of miraculous interpositions in nature.*—It is not contrary to, but quite in accordance with the convictions of mankind generally, that there should be miraculous interpositions. All skepticism in reference to the competency of human testimony for the proof of miracles is, as in the case of final causes, a result of delusive speculations. Deny that philosophy can reach beyond experience and generalizations from experience, and we shall then have nothing but the connections of an understanding, and can not conceive where a miracle should come from. No amount of human testimony can rise to as high a source of conviction against the uniformity of nature and for the miraculous interposition, as is given in universal experience against the miracle and for the uniformity of nature. The very basis of all philosophical conviction underlies the belief of the uniformity of nature; but the credibility of a miracle has only testimony, which all experience shows may be fallible. An assent to the fact of a miracle, therefore, on any amount of testimony is credulity, and a philosopher should be wholly above it. And, surely, if we keep this philosophy, there is no alternative to this skepticism in reference to all testimony for a miracle. That a Deity is assumed, who may control nature miraculously, can be only through the same

credulity; for all science is wholly within the generalizations of experience, and no experience, however generalized can reach beyond nature, but must ever run up and down the interminable sequences of her conditioned connections.

But we may readily pass by all this when we have learned the antinomy of the two operations of a connecting understanding and a comprehending reason. If we will admit nothing but the logical conclusions of a discursive connection, then verily are we shut up within nature, and the testimony of such as might rise from the dead could not avail to carry us beyond nature's linked successions. But if we have attained the complete idea of a comprehending reason, then nothing forbids that we should readily cherish the common conviction of miraculous interpositions.

Without canvassing the testimony for the validity of any specific miracle, in this place, it is sufficient that we show a ground in philosophy for such conviction when properly substantiated by testimony, and we may then take such common recognition of the fact of miraculous interpositions as involving the recognition of an absolute personality above nature. I do not at all apprehend, in any recognized miracle, that nature has violated her own laws of connection, and that any distinguishable forces in nature have of themselves broken away from their fixed order of development; for this would not merely transcend, but contradict the laws of an understanding. I conceive of a new event put into nature, which did not come from any previous conditions in nature, but from wholly a supernatural source. Nor is this new event such as might originate in a finite personality, as when by human volition changes are made in nature, which do not come of nature but of our free person-

ality. The new event has its source *ab extra* from all nature's conditions, and is also such a counteraction of nature, as evinces a power superhuman over nature. Opening blind eyes, and unstopping deaf ears, and healing the sick, and raising the dead, and controlling the elements, and thus directly overpowering nature in her own causal operations by a direct counteracting of her flowing conditions; these and such like events alone rise to what we mean by miraculous interpositions. Nature may then receive these new events and incorporate them within her own conditions, but they began to be in nature from no paternity of nature, and had their genesis wholly from a superhuman source.

And now we affirm the fact, that the human mind readily admits that such interpositions have occurred in nature, and it is only from a delusive speculation that skepticism arises while a complete philosophy sustains such conviction; and such conviction involves the recognition of an absolute personality; a will in liberty; unconditioned by nature and having a sovereign control over nature, and which may make new things or annihilate old things in nature at his pleasure. It is not nature at work upon herself, nor anomalous and monstrous originations in nature; but it is a hand from without thrust in sovereignty within, and modifying and making and extinguishing the forces of nature as it pleases. Such conviction can not be, but in the recognition of an absolute and free personality.

(3.) *The order of nature's formation, as given in Geological Facts.*—Here we meet with no speculations of a delusive philosophy to obscure or deny the facts themselves, but we take them as nature has left her own record of what has been done within her upon her own successive pages,

and in legible characters and a meaning unmistakable. The facts to which we here refer, and would present in the most comprehensive manner, are as follows. Repeated convulsions from deep subterranean forces have in frequent instances broken through the solid crust of the earth's surface, and turned out the edges of these upheaved strata to our view, which have their dip of a greater or less inclination to the horizon, according to circumstances. These exposed strata are the leaves of nature as a book, and contain the memorials of past historical occurrences through a long series of many and diversified geological epochs.

In the reading of this record backward from the present all traces of man's existence on the earth cease to appear, when we pass the accumulations of a few feet of soil upon the surface. Comparatively slight modifications of the alluvial deposits, or more violent and extensive changes of diluvial action which yet do not mark any deep convulsion, are alone contemporaneous with the history of man's abode upon the earth.

Passing these we come to the TERTIARY formation, and have commingled strata of *sand, clay and lime* of a thousand feet in thickness. The remains of animals of existing species are here found in large numbers, and yet such are constantly diminishing as we go down, until in the lowest formation of this series, very few traces of the existing forms of animal life now on the earth there appear, while their places are filled by strange fossils of many different and now wholly extinct species.

The SECONDARY formation succeeds, and we have the *chalk beds* of a thousand feet depth in which no fossil shell-fish and only one animal is found of the present existing

types of sentient being. We find next the *oolite* formation of half a mile in thickness, deposited by subsidence from rivers and seas alternately, and in this we lose utterly all traces of any existing species of animated nature, and among other new forms we encounter here the strange and monstrous saurian remains. The *new red sandstone* of two thousand feet comes next; and this followed by the *coal* formations of many thousand feet in depth, the carbonized remains of the immense vegetable productions of an older world, and in which no plant of present forms appears, nor is there any indication that any fowl then existed or any animal roamed through these primeval forests. Here are interposed, between the coal-strata, *limestone* formations of great thickness, not as the sepulchres of fossil shell-fish, but the remains in mass of myriads of testaceous or coralline animals. We come next to the *old red sandstone* formations many thousand feet in depth, and which are an aggregate of older rocks fractured and decomposed and promiscuously put together by successive depositions, and containing such organic remains as there lived and died, but which have left no successors among the latter fossil species.

Deeper and earlier than all these, come the PRIMARY formations. The *Silurian* system here has place for a mile and an half in depth, with its hundreds of animal species utterly extinguished in its own stratifying process, and their petrified remains testifying to the long cycles in which successive species one after another came, and ran through their respective generations, and then utterly ran out of being for later types of new organizations. Then we reach the *Cambrrian* system of nearly equal thickness of old slate rock, and in which the fossil remains of animal life are much di-

minished, and admonish us that we are coming to an age more solitary than the places of death and of graves, even to periods when sentient life had not yet a beginning.

The *Cumbrian* formation receives us still lower down, and here we stand with all the generations of life above us, worlds on worlds which have for countless ages slept in death, and read around us only the records of material nature ere life was given or death began its reign. *Mica schist* in stratifications of many thousand feet, are given; and then *gneiss* formations bring us down below the records of all stratifications; and the crystallizations of the solid *granite* deeper than we can penetrate, tell us only of the *fusing fires* beneath; and the leaves of nature's book are all sealed up from mortal eyes beyond. A region of ten miles in depth below the surface has thus been explored, and we can here deliberately trace the history of nature's operations, and the interpositions occurring in its own successions with unmistakable certainty and precision; through every foot of which there must have been the passing away of geological ages, to have sufficed for their accumulations.

Whatever the geological epochs, there is the evidence that antecedently to all accumulation in regular strata by any subsidence, there was in action the antagonistic force of attraction and repulsion, ensphering the mass about a common center; and also that the distinguishable forces of heat, and electrical and chemical agencies were superinduced, without at all subverting the original space-filling substance in its causality. Matter had thus chemical combinations as the development of such forces, and above these the crystalline force is superinduced, and thus as preparatory to organic productions material existence is brought into form,

and its conditioned changes run on in the development of causes and effects, and nature works itself out in the action of its intrinsic forces. Attraction and repulsion, bipolar forces, chemical affinities and crystalline agencies have their inner conditions, and their inter-working necessitates their resulting products. But neither of these distinguishable forces can carry their action beyond their own inner conditions. Gravitation can not act as caloric or electricity, nor can they act as chemical affinity and crystallization. By so much as the higher force conditions the working of the lower is there a superinducing of the higher upon the lower, and it were no more absurd to say that the lower originated in an utter void, than that the higher originated from the lower. By so much as it is higher and controlling it is a superinduction, and the excess to have come from the lower must have originated from utter emptiness. No distinguishable force can do more than develop its own rudimental being, and thus nature can never go out of herself as she is and bring into herself new and higher forces. All superinduction can be no development from inherent endowment, but must be causation imparted by an *ab extra* interposition. Crystallization overacts chemical affinities and gravitating agencies without extinguishing them, and could not thus have found its genesis from them, but must have been superinduced by some agency beyond them; and so in turn with all distinguishable forces, which shall overact crystallization, or any succession of such forces as shall one overact the other.

We may not, yet at least, be able to read from this book of geological records the fact that nature in her distinguishable forces was successively brought into being, and that

the superinduction of one force upon another, in simply physical organizations, was with interventions of long geological periods. We may confidently affirm that the lower could not beget the higher, but we can not affirm that they were successively superinduced, nor deny that nature began with the combination of the gravitating, chemical and crystallizing forces. As yet we have nothing but probabilities from analogy, to guide us in our conclusions higher up in geological periods than the originations of vegetable organizations. Though the probabilities are all the other way, yet we will not here decide that the crystallization of the granite mass, and the action of heat and electricity, and magnetism, may not all have been coeval with the force of attraction and repulsion in the space-filling substance. But whether contemporaneous or successive, their combination is no identification of these forces. They are as readily distinguishable from each other as if we had them in isolated action, and we can distinctly determine the parts which each performs in the formation of the physical structure of our globe. In this combination of agency, distinguishable through all its superinduced elements, we may now leave the consideration of the *times* of superinduction to some further study of the record, and merely apprehend, in the causality induced by the overacting and controlling of the higher with the still perpetual operation of the lower forces, that the subterranean fires, and the crystalline rocks, and the half fused gneiss formations, and superimposed depositions of mica-schist, would be a necessary result of the conditioned development. Nature would put on her conditioned forms, and take her conditioned positions, and pass along in condi-

tioned locomotion, and have her conditioned changes, from the action of her own forces.

But, after all this, we have a sure and clear record of successive interpositions. We can very legibly read what has been done since such forces had brought the merely material development through its preliminary stages, and it is to these results, as far more important now for our purpose, that we give a more special attention. Indefinite geological cycles passed round in the inward action and onward development of physical forces, and the onward series of cause and effect induced their combinations and cohesions, and the heat gave its molten masses, and the crystalline forces arranged the firm and deep granite beds, on which the entire geological superstructure through all its varied strata reposes; and yet periods of incalculable duration passed by, while the primitive gneiss rocks were attaining their consolidation and position, and while still later the mica-schist was being deposited; but at length a point in the ongoing of nature's conditioned changes is reached, where we have her record that what had never yet appeared, and what could not be begotten from all that nature was—a new and higher force than any yet in action—began its being and its manifest control, over the other forces on which it had been superinduced. In some shallow of the primitive ocean, where the broken and triturated particles of this primeval world had been accumulated by the forces then in action, wholly a new force is at work; and, overruling other forces for its own uses, it is building up forms and combinations of phenomena unlike all that nature has before known. A field of marine *algæ*, the product of a *vital* force, which organizes, and energizes through all the organization of root, stock,

branches and leaves, is in its first existence. The germinating life begins while yet through nature no parent stock or seed is found; and the plant expands and matures, and while the primitive organization falls and is utterly decomposed, this vital force still lives on in the ripened germ, and propagates itself in its undecayed energy in the newly shooting plant. Thus vegetative life begins, and runs on its course through all the following generations of that species of the sea-weed.

Whence, now, is this new force in such controlling action? It has just come into nature, and over-rides the other material forces, and is itself source for all these new phenomena, but whence is *it*? Gravitation, chemical and crystallizing forces, all say it is not *in us*, and can not have been brought out *from us*. It is their superior, and uses them and modifies them for its own ends. That it should be deemed some genesis of nature is absurd, for nature has till now known no causality which could reach so high and control so far, and by so much as it exceeds all former force in nature, it must thus have originated from an utter void; and which is just the same impossible supposition, as if all nature were deemed the offspring of an utter negation of all being. It has been superinduced upon nature, and has thus become an addition to nature, and can therefore only be a creation from some being supernatural. And yet so perfectly is this new force superinduced upon all the other forces which it uses, in the harmony of its conditioned and conditioning operation, that it is quite manifest this hand, which interposed and put it into nature, is the same hand which intelligently holds and guides all nature. We have not before been able to open the book to the record of

nature's beginning, but all has been developed nature, stretching back to a beginning we have striven to find, but could not reach. Here we find so much of nature as vegetable life begins to be, and so in harmony with all else of nature that it uses without extinguishing its other forces; and we recognize in it a supernatural personality, who is absolute for it, and for all of nature. And here also, we may see that the evidence for this recognition of an absolute personality accumulates through all the succeeding epochs of geological formations. The primitive forces of gravitation, cohesion and crystallization act on, and the new vital force controls them and perpetually reproduces itself in harmony with them through all its propagations; but, with the vital force as essential being for one marine plant, we can have in nature only its generations and in its own kind. This vegetative force is conditioned to its own organizations and can build up only its own phenomenal structures, and can never go out and originate a new species of organic life. Each new species of vegetable life is a new force in nature, more emphatically so for animal, and onward from the lowest orders of testacea or corraline existence up to the highest species of the mammalia. A new superinducing of beings, upon that which nature before possessed, is effected in each case; and as it did not come out of previous forces of nature in their conditioned development, so in each case, we have a new recognition of that same personal and supernatural interference which, out of nature, puts into nature what he pleases.

We come along up from this great depth to which we have descended and reached the lower sepulchres in which the earliest dead lie entombed, and from thence we pass along

by the myriads of once living beings preserved in their forms beyond the skill of all embalming, while at every step of our ascent we pass above entire species of animals, which had run on through many generations and then died out utterly in the extinction of the race, and another put anew within nature as its successor in time but without any genealogical connection. One form of sentient nature has thus been built up by a distinguishable vital force, which has propagated itself through all its generations and occupied its geological era, and that entire organic energy has ceased to act and its kind become extinct; and other species have in like manner been successively put anew within nature, and each has recorded its type of being in form and locality and habitude on the spot where its generations came and went, and we can as readily determine the originations and extinctions of the species as of the individuals themselves. New forms of life begin and end, sometimes in the same geological formations and sometimes perpetuated through successive strata, and these followed by others to become themselves in turn extinct, and thus nature has from the beginning of animal and vegetable life, been replenished by repeated and successive creations. Among the last products of his forming hand we find the book of nature like the record of Moses, to teach that man was made by God in his own likeness, and that his origin is a very recent date compared with the geological cycles since other and lower types of sentient beings began. What, in all cases of these super-induced forces of vegetable upon material, and of animal upon vegetable being, was there in the lower which should beget the higher? What, when one species became extinct, that should be the genesis of another widely different species?

What, in all that existed through nature, could rise so high as to give birth to man, when there was yet no human progenitor? As well might all nature rise into being from an utter void of all being at once, as to rise by progressive steps, with each addition an origination from a void of all being beyond what nature then contained. Over and over again we here recognize in these legible records of a supernatural interposition, which has put into nature that which nature yet had not, the existence of a free personality wholly unconditioned by nature.

(4.) *The recognition of a free personality in humanity.* We have before found that this is a universal conviction, and that the personality comprehends all that is moral in humanity and for which man is held by himself to be responsible. This we are convinced did not come of nature, inasmuch as it is competent to resist nature, and to distinguish its own originations from the conditioned successions of nature, and thus stand forth with its own in separate unity. Still this free finite personality is recognized as in combination with nature. The free force of the reason as spring of action in the right of its own dignity, is the power of will; and yet, while this may ever stand in resistance to all the wants of its sentient nature, it may never wholly separate itself from that nor prevent the appetitive wants from coming frequently in collision with itself, and can maintain its sovereignty only by perpetual vigilance and valor. The personality is habitant in sentient nature, and has the prerogative of an end above nature, and thereby an imperative to maintain its dominion over nature, but with all this prerogative above nature, it can not break up its combination and stand forth wholly pure from nature. Humanity is ever animal as

well as rational, and it can not exclude nature's wants from colliding often with its own ethical end, but only prevent such colliding wants, when they do and will intrude, from attaining the mastery. Nature, both without and within the human sensory, keeps on in her own unbroken successions of cause and effect, and the human will can not stop this, but only exclude her dominion within its own sphere.

Thus is it manifest that the human personality did not come of nature, since it may wholly exclude all domination of nature's conditions over it; and as manifest is it that nature did not come of it, for it can no otherwise free itself from nature than by excluding not by annihilating nature. It is a distinguishable energy superinduced upon nature, and as controlling nature in its own right is a power above force, competent to hold itself free from all external force and to hold in subjection all the inner forces of its own sentient nature.

Personality in humanity is not, therefore, deemed to be a higher force in nature superinduced upon existing lower distinguishable forces, as when the force of heat overrules gravity without extinguishing; but this personality as power of will is itself supernatural even in its superinduction upon nature. We recognize in this, not a new physical force, but an *ethical* personality as absolute above nature, who not only originated nature through all its superinduced forces in succession one above another, that the highest might *physically* control and use all the lower, but also crowned the whole with a supernatural in his own image, that this finite personality might *ethically* control and use all of nature for its own worthiness' sake, while itself should be subject only to the absolute dignity in the personality of its

author. In this author of human personality is universally recognized the absolute ethical personality of a Deity, who may originate not merely distinguishable forces superinduced upon some grand central antagonist force, but who must be of right the grand center of the whole ethical sphere, and have made both the physical and the ethical systems for his own worthiness' sake.

2. *The fact of a comprehending operation for universal nature is only by the compass of this Absolute Personality.*—Taking the universe of being, we have the material vegetable and animal worlds as purely physical existence, and wholly bound in the conditions of a nature of things. Their entire onward development is wholly necessitated from their primitive rudimental being, and all in combination as one universe had one fixed series without an alternative. We have in this universe of being, also, the complex existence of the sentient and the rational in humanity, and thus the human race so involved in the conditions of a nature of things, that in their constitutional being they belong to the same physical system, and must be comprehended within the compass of the same author and designer. We need thus here to see the fact of a comprehending operation of reason for the entire universe of being, material, vegetable, animal and human. This human has moreover its personality in liberty, and is thus ethical being; and in the end of its own intrinsic dignity and worth, the human personality must stand in moral alliance with all ethical beings in their personality; and we shall thus have an ethical universal system, including all free personality. We need, therefore, to see the fact of a comprehending reason for an entire ethical system, in its separate and comprehensive imperatives. We have,

then, to attain the facts for a comprehension of both a physical and an ethical universe. And here, in each case, the hypothesis is, that we never effect such comprehension except by the compass of this absolute personality which we have found to be universally recognized, and never even speculatively discarded but by a delusive parallogism which is now readily exposed. We will here take them up in their order.

(1.) *The comprehension of the Physical Universe.*—The comprehensive agency performs its operations only by the compass of an author and finisher. If a true and proper beginning be not reached, then no act of a comprehending agency can commence. All is left to the conditioned series of cause and effect, evermore reproducing itself in every repetition. And when a proper origination is attained, a designed consummation must also be apprehended, or the work of comprehension can not be completed. It is beginning and progress with no aim, having no end to be reached, and no goal of perfection to be attained; “a mighty maze and all without a plan.” Such encompassing author and finisher is found only in this recognition of an absolute person, as the God and guide of nature and the sovereign of the moral universe.

This is manifest abundantly, from the facts given in any direction where this conviction of the human mind, that there is such an absolute personal Deity, has not been discarded or in any way lost. If the rational in man has among any savage people, been as yet so little developed that the recognition of an absolute personality has not yet been reached, then has there to such a rude and barbarous tribe been no comprehension of any thing in nature; of nature as a universe; or of any ethical system. If through

a delusive speculation, such original conviction has been discarded, there has at once been lost all rational comprehension of the universe. Whence it came? and whither it tends? have been questions not only unanswerable to such, but in the discarding of all encompassing in a beginning and consummation, such questions are without significancy. We might as well ask whence come and whither tend the passing periods of time, for nature's connections are thus made as aimless and endless as the conditioned successions of indeterminate durations. No *Atheistical* system ever attempts to comprehend the universe. Nature comes, it knows not whence; and moves onward, it knows not whither. If it talk of laws and principles in nature, its talk is all absurdity; for its laws have no law-giver and its principles no *principium*. If it seek to generalize these laws and principles and make its God of the aggregate, and thus atheism change to *Pantheism*; it is only to change the absurdity of its language, for such an aggregate is still evermore made up of parts, and the parts can neither find nor make the one that shall comprehend the whole. No *Polytheistic* scheme can give an encompassing author; for each god is tutelar deity for but his own region, and all are in perpetual contention, until some recognized God of all gods harmonizes the whole, by encompassing the whole in his originating and consummating control. A *Manichean* theory, of two original sources of all being, is but just so far comprehensive as its assumed personality encompasses; and light and darkness, the good and the bad dæmon, divide the universe between them, and all is eternal conflict, except one be expelled in the supremacy of the other. No intellectual comprehension of universal nature has in fact ever been

made, where the comprehending reason did not encompass all from beginning to final end in one absolute personal Jehovah; and wherever such recognition of absolute personality has been attained, there, as a matter of fact, has universal nature ever been comprehended in him as sole author and finisher thereof. The law in the facts of all comprehension of nature is the recognition of an absolute and free being, and the process of all comprehension in the fact is in precise correlation to all such comprehension in the *a priori* idea.

(2.) *The comprehension of the Ethical System.*—Man is conscious of perpetual imperatives, and that there are perpetual moral obligations that must rest upon the race. It is not difficult to take the convictions of obligation, growing directly out of the inward witness of what is due to the dignity of man's rational and spiritual being, and find a perfect ethical system every way complete and comprehensive in its own autonomy. The existence of the ethical persons will itself originate the imperatives as universal moral law, and the control of the law universally will be the consummation of the moral government. This will include only such imperatives as may be made universally binding, and in which we may readily come to see that which *should be*, without regard at all to the enquiry, now, whether that which should be actually *is*. It is for the facts as imperative that we here seek, and not for the facts as they may be existing in real life.

Humanity in its ethical personality, is spring for controlling all the appetites of its sentient nature. They *should* in all cases be held so subject and the *good will* in each person should ever reign sovereign over *desire*. As separate

persons the highest imperative would be, the preservation of the integrity of moral character, which is found in making and keeping the ends of the sentient subservient to the end of the rational. The maxim for each person must be—do that which is due to the dignity of the person, in the complete subordination to it of the wants of the animal. This is the duty of each person, and hence it is due as a *right* in each person, that no other person be allowed to interfere, and endanger its continuance. As social beings, therefore, each having imperatives in the right of his own personality, and thereby the right to an unhindered compliance with such imperatives, the maxim for each must be—do nothing that shall infringe upon the freedom of another in his compliance with the imperatives of his own personality. Such individual maxims thus made into law universal would be thus expressed—respect thy own rights and regard the liberty of thy neighbor in his rights. All rights originate in the intrinsic dignity of personality, and all imperatives originate in rights; and thus all rights and all duties at once exist in the existence of human society, and the sum of all law for such society is found in the above maxim made into law universal. From this, by analysis, may be derived every private and social duty, but which it is not necessary should be here formally drawn out. The entire community in the aggregate would attain the consummation of a human society, by the control of such universal law. The aggregate would become an organic whole in systematic unity thereby. Each person, as component element in such a society, would be both end in himself, and auxiliary to the end of all, sustaining his own worthiness and contributing to the universal dignity. The social body

would be altogether without schism, and the functions of a healthy life going on in every part. In the social system of humanity this *ought* so to be; and then the whole stands out in its completeness under the directory of its own law and blessing itself in every part through the perpetual results of its own action.

Such a consummation is no mere conception arbitrarily created. That humanity is in social being, is ground sufficient to induce the universal conviction, that such a consummation *ought to be*. The imperatives originating in its own being give the claim for such an ethical system in its origin and consummation. All should thus act from the maxim which is imperative as law universal; and all so acting, the aggregate worthiness and blessedness is attained, and virtue and moral self-complacency reign in every part. It is righteousness rewarding itself according to its merit in its own results.

But that which *ought to be*, *will not be*, when any one person has violated a right and introduced sin into the system. This one violation reaches through and breaks in upon the rights and the complacency of the whole. All have a righteous claim upon every other that they each fulfill the law universal, and that no one shall be as "a broken tooth or a foot out of joint." And when such offending member introduces his disturbing and colliding moral action, it is the equitable claim of the whole, that the delinquent and all his deranging action be at once excluded. But it *ought* not to be that his exclusion be merely topical displacement, as the removal from a material machine of some part broken or become rotten. Remorse and shame is the sinner's due, and the moral disapprobation of all the holy, perpetually

made manifest toward him, is the righteous demerit of the guilty. The light, in which he ought to regard himself as lost in dignity, is precisely the light in which all others ought to regard him; and his retribution of shame, self-reproach, and public abhorrence is as imperative, as the approbation and complacency for the virtuous.

And still further, the sin and colliding agency of one does by no means release any other from the imperative of the law universal, but each is bound to the same integrity of character personally as before the unworthiness of one had been introduced. And here then begins an evil which the action of the system can not in itself remedy. The imperatives remain, but the bliss of all is marred. Even such as are firmly loyal to the right rule feel the colliding influences of the sinner, and their freedom and rights and blessedness are impaired. The system can not repair itself in its own action. An intruding evil has come in which it can not eject. The system must still work on under its imperatives, but it will now perpetually and forever work wrong.

And so, precisely, we find the facts to be. They *are* not in human society as they *should* be. What ought to be is not, and the ethical system is perpetually contravening its own imperatives, and perpetuating moral inconsistencies which it can not itself redress. The retribution of the wicked, and the exclusion of their colliding influence is not as from its own imperative it ought to be. That which is differs far from that which should be, and the perpetual ongoing is a perpetuation of wrong-doing. In such a state of facts all comprehension of an ethical system were impossible. That has come in which should not have originated, and that consummation which should be is unattainable. The fact as

it is has no satisfactory origin or end, as ethical system. It stands itself, in its own working, abhorrent to the moral reason and conscience it embodies; and is an ethical blot, eternal and irremediable in its own helplessness of all self-cleansing.

And here, the question is, how comprehend the ethical system in humanity as we find it, marred, perverted and incorrigible from its own action? We can comprehend an ethical system as it *should* be very readily; since the existence of the human society would itself originate the rights and the imperatives, and the fulfillment of the law universal would be its consummation; but it is a very different fact of comprehension when the ethical system is already perverted and in itself helpless and hopeless of all restoration in its own movement. How such perverted ethical system originated? how be consummated? is now the problem. In what way is the operation for comprehending an ethical system effected, as the system *is* in its depravity? And to this, the answer is universal, both as negative and positive. No Atheistic or Pantheistic system ever did or ever can comprehend an ethical government over human beings in their depravity, by accounting either for the origin of sin, or for the recovery of the race from it. All Theistic systems ever have made such a comprehension, by encompassing all with the hand of an absolute moral governor from the inception to the consummation; and in some way referred to Him, in the perfection of His wisdom, the sovereign disposal of all that the moral government involved. Under the administration of a Divine Sovereign, has the human race been created, and the ethical relations and responsibilities established, and the sin and disorder have

come in and will be so controlled as at last to work out a consummation worthy of his dignity, and corresponding to every claim that his subjects may righteously lay before his throne. Whatever may now be hid, in the darkness of his inscrutable dealings, is only mystery to the finite subject; "God is his own interpreter, and He will make it plain." Thus, and thus only, has there ever been effected any comprehension of an ethical system in depraved humanity.

It might be very easy to show here, that the provisions of the Gospel scheme of Redemption are precisely adapted to the interests of reason in effecting such an ethical comprehension, and that the divine interpositions have been wholly regulated by the behests of God's own worthiness and dignity. It behoved him so to interfere and no otherwise in the permission, the overwhelming and restraining, the expiation, pardoning, and punishing of sin. On the christian ground of a moral government, its comprehension is in complete conformity with every fact of man's ethical responsibility and God's righteous sovereignty. Man in his freedom *should* have been no otherwise restrained; God in his holiness *should* have no otherwise interposed. But our whole work in determining the fact and the law of a comprehending reason, for an ethical system as it *is* in fallen humanity, is completed in this, that we now see that it has never been attempted except upon Theistic grounds; and that in the recognition of an absolute personality as moral governor, whether without or with the light of a divine revelation, the moral system with the sin and evil in it has ever been held, as in some way having a rational origination and ultimate consummation.

Putting thus together all the facts of a comprehending

agency, whether on the limited field of humanity, or of a divine operation in nature, or of a divine government over an ethical system of fallen beings, and finding in all that the only law is that of a free personality, and that without such compass of a personality in liberty no comprehending as fact is any where given, we have an induction sufficiently broad for deducing the general law of all comprehension; and this law in the facts is the precise correlate of the *a priori* idea of all comprehension, and thus gives science to the operation of reason. We have as demonstrative a science, for an intelligent *comprehension* of universal humanity and universal nature, as for the *connection* of phenomena into a nature of things, and for the *conjunction* of the diverse in quality into definite phenomena. We have thus the science of our entire intellectual being, including the functions of the Sense, the Understanding, and the Reason. This is all that we have proposed to ourselves, and in this we have a complete philosophy of the human mind—a *Rational Psychology*.

We *understand* the universe in the space-filling forces that constitute it, and which in their substantial being and causal action determine all sense phenomena. We *comprehend* the universe in the activity of a personal spirit who creates and governs it. He is the author of nature, and of the common space and time of nature, and is thus himself absolved from all the conditions of nature and of nature's space and time; and in this he is the Absolute. The Absolute can not be *understood*, for all the conditions which give law to logical thought are wholly impertinent, and all the conditions which give unity to the judgment are insignificant when applied to Him. He can not be *comprehended*

by any finite intelligence, for He is the absolute compass comprehending all things. He can be *rationaly apprehended* as a Spirit in His self-activity, self-law, and liberty, by all rational beings, and is thoroughly known only to himself; "the things of God knoweth no man, but the spirit of God." To the understanding which would ask *how* God is, we say, "Canst thou by searching find out God? canst thou find the Almighty to perfection? It is high as heaven, what canst thou do? deeper than hell, what canst thou know?" To the Reason which has its insight into nature, "his eternal power and Godhead are clearly seen," and to the reason only does revelation disclose the being of God. We thus know *that* he is, and *what* he is, but can determine nothing *whence* and *how* he is.

APPENDIX TO THE REASON.

AN ONTOLOGICAL DEMONSTRATION OF THE VALID BEING OF THE SUPERNATURAL.

A COMPREHENDING Reason in its process of operation has now been fully obtained both as subjective idea and objective fact, and in this is a complete science of the reason as faculty for comprehension and in which we conclude our examination of the whole field of Rational Psychology. As in our completed science of the sense which is faculty for conjunction, and also of the understanding which is faculty for connection, we found the data for an ontological demonstration of the valid being of the objects given in each faculty, so here it may be expected, that the science of the reason will furnish the data for an ontological demonstration of the objects cognized by it in its functions of a comprehending agency. These are the finite personality in humanity; the absolute person as author and governor of nature; and the consummation of his final end of a universal system in some future state of moral existence. Our whole work will thus be concluded in this outline of a demonstration for the valid being of the supernatural, in the several respects of THE SOUL, GOD and IMMORTALITY. From what has preceded, a bare statement is sufficient.

1. *The valid being of the Soul.*—The conception of the

soul as an existence which is supernatural includes more than living and sentient being, and a higher capacity of action than from any promptings of appetite or general judgments of greatest gratification deduced from experience. All this is conditioned and held in necessity by somewhat that has gone before, and is thus bound in the linked connections of nature, and through its most subtle analysis or in its highest generalization can be but nature still, making no possible approximation towards the supernatural. There must be an existence which is ethical, and which in the right of its own personality may act independently, and in liberty, and feel a conscious responsibility for such action. Is there a process of demonstration for the valid being of such Soul?

Two sources of argumentation may be taken.

(1.) *The fact of a comprehending agency.*—Neither a conjoining nor a connecting agency could attain the conception of an operation of comprehension, much less that either could actually comprehend. An acting liberty, as rational personality, can alone comprehend any thing as having a proper origin and consummation. The fact therefore, that man comprehends nature in the compass of an absolute personality is demonstration that he is Soul.

(2.) *The facts as given in an ethical experience.*—Were there the conception of an ethical personality as soul somehow attained, still no mere ideal of the soul could give the actual facts of its rational agency. The following, among other facts, are in actual being—imperatives controlling all appetites; affections above all sentient emotions; reciprocal complacency between moral personalities; and more especially a capacity to resist all the conditions of nature and

stand firm on the ground of duty—and the fact that man has such experience is proof that he is Soul.

2. *The valid existence of God.*—There are three lines of demonstration.

(1.) *The fact that all atheistic speculations are from the antinomy of the discursive faculty as understanding, and which have been shown to be delusive.*—This delusion removed, the teleological argument for an author and governor of nature, derived from the traces of design in nature, remains irrefragable.

(2.) *The fact of new forces originating in nature.*—Such facts have been before given, and could not come of nature. No mere conception of a God could give such facts. The facts are, and they demonstrate that a God is.

(3.) *The fact that an ethical system is in being.*—This has beforehand been made manifest. Such ethical system can neither originate from nor be controlled by any thing in nature. That it is, is demonstration that an absolute ethical person as moral Lord and Judge exists.

3. *The validity of the Soul's Immortality.*—The existence of humanity is itself origin for the rights and imperatives in an ethical human system. Obedience universally to these imperatives is a consummation of the system in its perfection. But as fact, the law universal is not kept. The moral system is thus in its depravity, and if left to its own action its consummation in its moral perfection is quite hopeless. What *ought* to be certainly will *not* be, from the system's own action. Is there then any way of demonstrating the consummation of a moral system, and in this, demonstrating that the soul shall be immortal?

The process is as follows. The truly virtuous man has a

righteous expectation of happiness ; and his hope rests upon an imperative that his blessedness be equal to his merit. The vicious ought to anticipate misery equal to his demerit. The virtuous and vicious ought so to be placed, that the wickedness of the one shall not interfere with the liberty, endanger the virtue, nor diminish the bliss, of the other. The virtuous have not, however, what they might hope for ; the vicious have not what they should fear ; and the action of the bad perpetually annoys the good. If what ought to be is to be, an ethical sovereign must make it so to be. And unless morality is a figment, and all our ethical experience a chimera, such a consummation must some way be effected ; hence, on this ground alone a strong *faith* in the being of God, and of a future state, might be cultivated. But at the most it would be faith, and not science. There would be facts in our conscious imperatives showing what *ought* to be, but we could not thus reach the facts for demonstrating, that what ought to be in fact *will be*. But if now we add what has already been attained, in the ontological demonstration of the actual being of a God, then we have sufficient for a conclusive proof. God *is* ; a future state of rewards and punishments *ought to be* ; the existence of God is a guarantee that what ought to be surely will be. God is ethical goodness, and it is impossible that He should deny Himself. It is thus infallible that the soul shall live on in its obedience and bliss, or in its disobedience and misery, forever ; and also, that the time must come, when the separation of the righteous from the wicked shall effect the designed and demanded consummation of the moral system.

